

Although this may be thought a very troublesome Method, to set on and remove these Hurdles every Night and Morning; yet every *improving Thought* is to be encouraged; and I shall always acknowledge my self obliged to such ingenious Contrivers, as attempt probable Remedies for the Misfortunes of a bad and uncertain Climate. However this will be readily discerned and acknowledged, that which soever of the Ways before mentioned be chosen, they all centre and rest in this true and undoubted Maxim long since laid down by my self, that the chief Destruction of Fruit in the Spring, is owing either to cold Storms of Snow and Hail falling *perpendicularly* in the Day, or to the cold Vapours and Dews falling from the upper Region in the Night: Therefore the best Shelter and Guard against these, must rationally be supposed to be such as are placed *horizontally*; and yet so as to lose as little as possible of the Sun's Rays and Heat. But that I may avoid Repetitions, as much as possible, and yet give the Reader a clear and distinct Idea of this Matter, I will here insert a Copy of a Letter I wrote to the Right Honourable the Earl of Warrington, who proposed some Queries, and desired my Advice in this Matter.

My LORD,

“ I Had the Honour of your Lordship's Letter, dated *January 3.* which came not to  
 “ my Hands till a Week after. I take this first Opportunity therefore to give your  
 “ Lordship my Thoughts of what you are pleased to propose relating to *horizontal Shel-*  
 “ *ters.* I perceive that which gave the first Thought of making one projecting Shelter  
 “ on the Top of the Wall to serve for all, was the Observation of an Yew-Tree project-  
 “ ing over an *Apricot.* And indeed the Effect and Consequence of that Shelter was exactly  
 “ agreeable both to Philosophy and Experience. But then it is to be considered, that that  
 “ being no Part of the Wall, but elevated something above it, it robb'd none of the  
 “ Wall of the Benefit of the Sun's Rays, and yet gave it all the Advantage of a Shelter  
 “ by a considerable Projection: Whereas a Wall of only nine or ten Foot high, if it  
 “ should have a coping to project twelve Inches, would not be above half sheltered:  
 “ And yet so much of that half as the Projection comes to, would be in a manner lost  
 “ by being deprived of the Sun's Rays. For though I say the chief Cause of our Blasts is  
 “ from cold perpendicular Dews in the Night; yet by that Expression is meant only *Dews*  
 “ *falling perpendicularly,* i. e. as perpendicularly as floating Vapours in the Air will be suf-  
 “ fered to fall; which yet are easily put out of an exact perpendicular Descent by the  
 “ least Breath or Motion of the Air. This is I think made very intelligible by the easy  
 “ Figure below. To give therefore some real advantage to Brick Walls already built I  
 “ should advise, either to plant Rows of Ever-Greens, such as Yews, Firs, &c. on the  
 “ North Side, suffering them to grow into a Hedge after they are got four or five Foot  
 “ above the Wall, and then to be clipt in the Figure of a triangular *Prisme*; or to fix  
 “ pretty frequently bits of Glas three or four Inches wide into the Joints of the Brick:  
 “ Or lastly, to fix half a dozen Rows of thin Lead of the same Breadth (with Notches  
 “ in them for the Branches to pass) which may be turned up and down as occasion  
 “ serves, either to give reflected Heat, or to shelter the Blossoms in the Spring. If I  
 “ should be so happy as to give any useful Hints for the Improvement of Vegetable Na-  
 “ ture, or to have made any Observations that shall please such ingenious Enquirers as your  
 “ Lordship, it will add much to the Satisfaction I have all along had in these sorts of  
 “ Pleasure, and in the Retirement I enjoy. Your Lordship therefore may readily com-  
 “ mand any Assistance in the Power of him, who is tho' unknown;

Your Lordship's

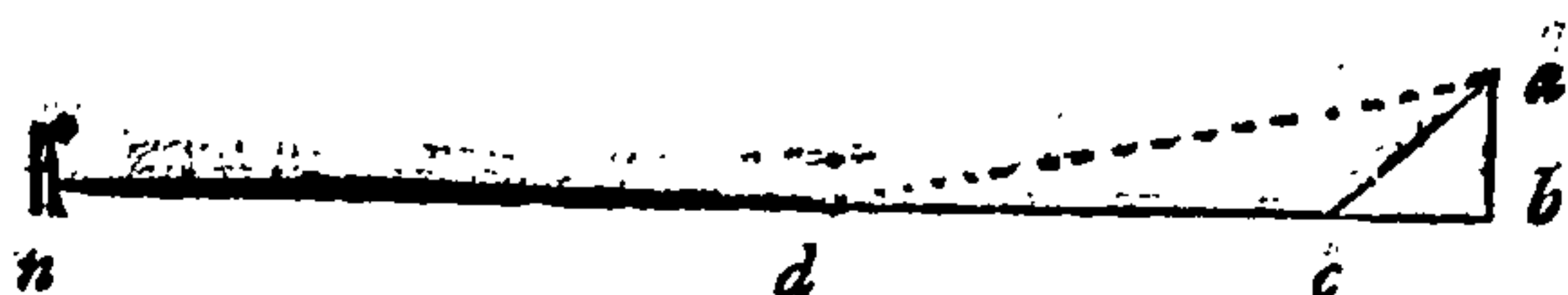
Yelvertoft, Jan. 14.

171<sup>8</sup>.

most obedient humble Servant,

J. LAURENCE.





*n*, is a Brick Wall ten Foot high.

*a b*, is an horizontal Shelter one Foot projecting.

*a c*, a Line representing the Shadow of the Sun at a middle Altitude for the Six Summer Months.

*a d*, the Line of the cold Dew falling nearly perpendicular. Therefore,

*b c*, equal to one Foot, loses most of the Advantage of the Sun.

*c d*, equal to four Foot, that part of the Wall which enjoys the Influence of the Sun and Shelter.

*d n*, equal to five Foot, that part of the Wall which loses all the Advantage of the Shelter.

As to those strong black Winds, which come from the East, or North-East, and are supposed to convey along with them the minute Eggs of destroying Insects; *these*, as they commonly blow more *horizontally*, so their Influence cannot be supposed so immediately to reach or affect the best and tenderest Fruit planted on the Southern Aspects. Dwarfs, Standards, Espaliers, and the North or North-East Walls will indeed lie open and be exposed to their Ravage and Fury, if they happen to blow in the Time of their full Bloom: But as those *black Winds*, sometimes attended with Frost, do generally cease blowing, before the Glory of the Dwarfs and Standards appears, their Influence is the less hurtful.

But to prevent their Danger, the Practice of the common People in some Countries seems to be rightly founded, and should be encouraged, *viz.* When these Winds blow so late as to raise their fears, they provide large heaps of *Weeds*, *Chaff*, or other combustible Matter, on the Wind Side of their Orchards, and set them on Fire; that the Smoak may suffocate the Insects or poison their Eggs, as they pass along with the Air. By this means it hath been taken notice of by some curious Persons, that large Orchards have been preserved, whilst the neighbouring Parts have suffered great Blights, and the Loss of all their Fruit.

From all the Observations I have made, I gather, That the later these Easterly Winds blow, the more harm they do; and I am the more confirmed in the Opinion of their carrying and conveying the Eggs of Insects along with them from the Continent, from an Observation I made (and I cannot but wonder it was made by no body else) of a general *Blight*, which the *Horse-Bean* suffered in the Year 1719. throughout most Parts of *England*, of which I sent an Account to Mr. *Bradley*: And he hath accordingly given a Figure both of the *Bean* and the *Insect* which was bred in it in his *Phil. Works of Nature*, &c. But because it is left there without any Observations upon it, I shall observe as followeth. That the little *Insect* (as was thought it did by most to whom I first shew'd the *Bean*) *did not* make its way *into*, but *out of* the little Hole in the Side of the *Bean*. And I had a plain and visible Demonstration of this, by observing the gradual Progress the Insect made with its Horns or Teeth, before the Hole was perforated. I laid by several Beans in my Window, that I could plainly perceive had Insects in them, (for indeed there were few that Year without them) and though there was no Orifice when I laid them by; yet in two or three Days after, I plainly saw the Insect struggling to get out of the Hole itself had made, and in an Hour after it took Wing and flew away. This was in the Month of *October*; and it was very remarkable that Year, that these Insects were so numerous and so troublesome in the Air in a warm Day, that it was no small Uneasiness to a Traveller, to avoid their beating in his Face, or flying into his Eyes.

The Solution of this odd *Phenomenon* cannot be difficult on the foregoing Supposition; that Easterly Winds bring over the Eggs of Insects, and when they are lodged in proper Places for their Maturity, lye there and hatch: I cannot see any other possible way to account for a living Creature's coming from the Heart of an entire *Bean*, and making its way out by force, but by supposing its Egg to be lodged in the Blossom, and afterwards encompassed.



encompassed with the Bean itself, as a proper Matrix to bring it to perfection by gradual Warmth. \*

N. B. Some of the Beans had two or three Insects in them and as many Holes.

There seems to be good reason to believe, (tho' I have made no Observation) that this is the Case of the common *Nut-Gall* so frequently observed to have one or more little round Holes in them; through which it is very probable some Insect or other made its way, after it found itself brought to Maturity and had strength to shift for itself.

I cannot forbear taking notice here of an ingenious Query a learned Friend has put relating to Blights, in a Letter to my self, viz. from the known and demonstrated Observation of the different Weight and Pressure of the Atmosphere at different Times, whether or no the *Air* in the Tubes or Vessels of the tenderest Blossoms, which by its elastick Power will dilate itself as the incumbent Pressure is lessened, may not possibly sometimes break, or rather contribute to break their slender Sides; and by that means render the Blossom unable to perform its Office of supplying the Infant Fruit with proper Juices, which may be supposed one reason of Blasts. I say *contribute* to break, because I believe 'tis not alone sufficient; but with the sharp Particles of Winds may easily destroy the Hopes of the Year.

Many or indeed most Blasts evidently arise from Injuries done to the Stile in the middle of the Blossom, which being made brittle by the Frost, the Winds easily break the Icy Juice in two; whose sharp Angles cut the Vessels; and so they become no longer useful, either to convey impregnating Matter to the *Embryo*, or to defend it from further Injuries. Thus far the Fact is certain, that the Stile in the middle of the Blossom erecting itself something higher than the rest, is always the first part affected with Blights, and when that is discovered to be *riveled*, or to turn colour before its Time, such Fruit is to be given over as lost. But it is easier to find out the *Cause* of the Disease than the *Cure*; and if I thought horizontal Shelters variously apply'd, would do nothing, I should soon give over all other Remedies.



## C H A P. XXV.

### *An Exhortation and Address to the Nursery-Men, throughout the several Parts of Great-Britain.*

GENTLEMEN,

**Y**OU are not perhaps sufficiently sensible how much of the future Pleasure and Profit of all such as take delight in a Garden is owing to your Art, Honesty, Contrivance and Care; and therefore to you I address my self, hoping you have Ingenuity enough to receive an Exhortation with Temper, tho' it comes from a Clergyman. And that what I have to say may be better understood, and make the deeper Impression, I shall methodize it in the following Manner.

1. I would fain hope you will all agree with me, that it is both your Wisdom and your greatest Interest to act always upon the Principle of Honesty and fair Dealing; and that in all your Correspondence with the Gentlemen, thro' the Kingdom you make a Conscience of sending *Trees, Shrubs, and Seeds* that are right and good. I speak this here, not as a Divine and a Lover of Honesty; or as if I thought Nursery-Men and Gardeners more than others wanted that Caution; I would hope rather the contrary; but the Light I would set this matter in is this: Knavery and Deceit in a Nursery-Man, wherever that happens, affects not the corresponding Gentleman so much in the Value or Loss of *Trees*, as in the Loss of *Time*, and the Disappointment he is thrown under. No Value or

\* Query, Whether this may not give a probable Solution of the odd production of Worms in human Bodies. viz. That their Eggs or Embrios floating in the Air, are suck'd in by the Breath, and in the Bowels brought to Maturity.



Consideration almost can be set against the Loss of three or four Years of the best part of a Man's Life; because *that* can never be recalled, which makes the Injury *irreparable*, and the Deceit *barbarous*. Where there is Ingenuity, Honour and Honesty, *this* which I have said is sufficient; and where there is neither, *more* would signify nothing.

But before I close this Head, I cannot but mention the Hardship a worthy Gentleman of my Acquaintance in *Northamptonshire* underwent from the knavish Usage of his Nursery-Man; who in a pleasant Irony told him. "It is true, you Gentlemen charge us (and very often justly) with sending you down bad Trees, and wrong Sorts; but though you may think us *Knaves*, you must not say we are *Fools*; for we have three *Hits* for it. First, if the Tree I send you down be a wrong Sort, or on a bad Stock, the Tree may die before it comes to bear, and then the Fault is laid upon the Planter, or other Accidents and outward Injuries, and so I hear no more of that, but another is sent for in its room, perhaps of the same kind. Secondly, The *Gentleman*, who sends for the Tree, may chance to die before it comes to bear, and then the next Heir blames the *Choice*, and sends for another. Or lastly, I may die my self, and then the Proverb takes place, *De mortuis nil nisi bonum*.

In short, this merry Fellow cheated the Gentleman in almost every one of his Fruit-Trees, either as to their Goodness or Sorts; and though after three or four Years he planted them all over again, yet I think he lived not to taste much of his new Plantation.

2. Another piece of Advice I would give you, is to keep an exact Oeconomy in your Nurseries, so as to register and methodize your Sorts in a most exact manner, keeping a Counter-part of the Nursery in a Plan, in such a manner drawn, that you cannot mistake the Sorts when a Demand comes for them. The want of this I am very certain is the occasion of many of the Reproaches cast upon the Nursery-Men: When as it was not *Knavery*, but *Ignorance*, and want of Method that occasioned the Misfortune and Disappointment. But the Complaint sometimes is, that the Trees, though of right Sorts, yet are unthriving and short-lived: To prevent which, you should always take care to make use of right Stocks, especially for *Peaches*; that you inoculate them on some of the larger Plums, *Bonum magnum*, *Muscles* and *Pear-plums*, and that the tenderer Sorts of them be put upon *Aprescots*; the Gentlemen will not think much to give something extraordinary for such double Care, which would bring you Credit besides. Indeed the *Paradise-stock* for Apples, and the *Quince* for Pears, are not and cannot be expected to last so long as *Free-Stocks*; and there are few who know any thing of them, who send for them with any other View or Expectation, but to have them bear soon and on low Dwarfs. But to have *Peach-Trees* languishing for several Years, and, it may be, die before the Time, for being put on wrong and knotty Stocks; this Usage Gentlemen are wont highly to resent; they expect, I am sure they deserve better from you. But,

3. Give me leave once more to address my self to you in another Article, which I am sure will turn greatly to your Advantage, and wherein you will be highly serviceable to your Country. The common Adage of *Ars longa, vita brevis*, frequently and naturally recurs to a Man's Thoughts; and the oftener, as he grows older. Now to make this melancholly Reflection sit easier on the Mind, the Way would be (if it could be hit on) to *shorten* Art and to *lengthen* Life. And give me leave to say, this, with respect to the Subject we are now upon, is effectually answered by what I am going to propose:

That you would always take care to have a sufficient Number and Stock of Fruit-Trees, of between four and six Years old; ready trained up, and spread; fit to be transplanted to any Distances not very remote, that when a Demand comes for a whole Plantation from a Gentleman, that has lost and would gain so many Years of his Life, you may be able to answer him.

This is no airy Supposition that I am making, but a strong Reality; for alas! it may easily be observed that the Love of a Garden doth not often seize a Man, till the other less innocent Gaeties of Life are past; and then, when Reason hath so far got the better of his Passions, as to shew him the Way how to fill up the Parenthesis of Life with some profitable Amusements, how eagerly may such an one be supposed to embrace an Offer and Method of recalling four or five Years of his past Life, or (which is the same thing) putting his Plantation in the same State in one Year, as would take four or five in the ordinary way to effect?

This thing my self, as well as some others, have occasionally mentioned; but without *pressing* it, and without setting it in that true Light which the Importance of the thing requires. By what the World has experienced of late Years of your Ingenuity, Diligence and



and Care, in improving and cultivating Vegetables, you are most of ye sufficiently capable of improving and putting in Practice these Hints: But you will easily excuse me, if I throw in some such Thoughts and Directions of my own, which you may either *chuse* or *refuse*.

Some have recommended Frames of Wood or Tubs, wherein to plant Fruit-Trees, which may be taken to pieces at pleasure, when the Trees are removed to their proper Places. But however this may look in the Theory, the Method is so cumbersome, that I cannot find that it hath been ordinarily put in Practice, at least in any Quantities. Some are sanguine enough to think you need be under no Uneasiness about removing large Trees, even during the hot Summer-Months, if the Roots be but immediately anointed with some of Mr. *Whitmil's prepared Gums*. It is good indeed to know all that Nature will do, and every thing that an Exigency or Necessity may require; but I could never yet see, why any one should chuse to put Nature to the Stretch in the hot Months, when there is so large a Share of the other Parts of the Year, when it may be done with the utmost Ease and Safety.

The Method which I would propose and recommend for common Practice, is to have always a sufficient Number of Dwarf Fruit-Trees planted in good strong Baskets, which, if they are put into the Ground with the Trees whilst they are green, will last two or three Years, and so may be shifted into new ones, as Occasion or Necessity requires; for tho' the Trees will extend their Roots through the Baskets, yet when they are removed into other and bigger, they may be *shortened*, which will make their Roots more *matted* and the Trees fitter to be removed. And thus they may be trained up for four or five Years in the Nursery, pruned according to Art, and their Branches extended and ty'd to upright occasional Sticks in the Fashion they are to stand, when set against the Wall.

Or if it shall be thought that Baskets will rot *sooner*, and not answer Expectation in Carriage, the Trees may grow in the naked Ground in the Nursery ordered as above, and if the distance is not great (for I would have Nurseries in every *Market-Town*) taken up with Care and a little Art, they may be safely transplanted eight or ten Miles, with all or most of their Roots and Branches, without Earth. The Method of doing it, I would advise to be thus; As soon as ever the Tree is out of the Ground, secure the Roots as well as possible from the Air and Wind; and to do this effectually is the whole Mystery of *Gums*, or vegetative *Mummies*; and yet every thing of a viscous Nature, that is not corrosive, is a sufficient Preparation without any more ado; such as *Soap, Tallow, Wax, Grease*, or perhaps all of them mixt together is best to supple the Roots with all over; then let them be bundled up in Straw well matted for Carriage. And the Holes being ready prepared to receive them, let the whole Matter, fine Earth and Water together, be brought to the Consistence of a Pap or Hasty-Pudding, round about and quite covering all the Roots; over which may be laid *Moss, Fern, or Weeds*, to prevent the too great Force of the Sun; which yet will dry and crack the Surface, that must for that Reason be sometimes loosened and covered with fresh Mould.

I should advise these sorts of Removals to be made either in *October*, not too near the beginning of Winter, or in *February*, not too near the beginning of Summer; and then if there be any Degree of Care and Judgment used, you need not doubt of Success; but may depend upon seeing (bating Accidents and unkind Seasons) a reasonable Quantity of Fruit the very first Summer, and *Plenty* afterwards. Forest-Trees and Ever-Greens of all Kinds, may safely be removed with the same Care and Caution.

Gentlemen, I have had sufficient Experience of what I here say to be right, and I exhort you to practise this, or some other analogous Method; as well for your own Interest, as for the good of your Country and the Delight of those Gentlemen, Lovers of Gardening, who I am satisfied will not fail to reward your Industry, and every ingenious Contrivance of your own to promote their Pleasure and Profit.



## C H A P. XXVI.

*Of the Differences of Climates, with the Conveniencies and Inconveniencies of Soils, Situations and Degrees of Latitude.*

**I**N the Business of Gardening, and for the Cultivation of late and tender Fruits and exotick Plants, there seems to be nothing more wanting, or more necessary to be explained, and set in a true Light, than the Knowledge of the real Difference of the Degrees of Heat and Cold, and the true Causes of that real Difference. For the Judgment that most People form of these things commonly arises from weak and insufficient Reasons, or they lay a greater Stress upon the Cause than can be supported by the Effects drawn from Experience.

For the Purpose; there is nothing more common than to hear People say, and to see Authors write, that if you once go two or three Degrees North of *London*, you must expect no good Fruit, especially of the better and later sorts; and Sir *William Temple* himself, in his *Garden of Epicurus*, was so weak as to say, “That when you get past *Northamptonshire* ’tis to little purpose to plant any of the best Fruits, as *Peaches* or *Grapes*.” And at the same Time commends his Friend in *Staffordshire*, that he planted nothing but good *Plums* as the best Fruit he could attain, even by the help of *South Walls*, and a good Soil. And I have a Letter now by me from an ingenious Friend, which gives me an account what pains he has taken in a *Statistical* Way, to find what Influence the Sun hath on the Roots of Trees and Plants at different Seasons of the Year, by the means of *Thermometers*.

“Six of these he tells me he has provided, whose Stems are of different Lengths, from eighteen Inches, to four Foot. The Scales of these he divided into ninety Degrees beginning to number from the freezing Point. The shortest of these he hung in the open Air with a South Aspect in the middle of his Garden: The Ball of the second he placed two Inches under Ground; that of the third four Inches; the fourth eight Inches; the fifth sixteen Inches; and the sixth twenty four Inches under Ground. Their Stems, which stood above Ground, were secured from Injuries and Weather by long Boxes; on which the Scales of Degrees were fixed. I keep (saith he) a Diary of these, whereby I know exactly the Sun’s Warmth in the open Air, and at those several Depths under Ground, at all Times of the Year. If now the like Observations were made so much further North as you are, ’tis probable that by comparing both together many useful Observations might arise in the Way of Husbandry and Gardening. Though you live in a fruitful Soil for Corn and Grass, and the hardy Kinds of Plants; yet I believe you, who have such a Taste for Gardening, must have but too much Occasion to lament your being removed so much further from the benign Influence of the great universal Genius of Vegetation.

This ingenious Gentleman seems to be of the common Opinion, and to have entertained Prejudices against our Country; But this I say, that I who have lived all the former part of my Life in the Middle and Southern Parts of *England*, and have been no incurious Observer of Vegetables and Taster of Fruits, can with Truth aver, that I never eat more nor better Fruit even of the later Kinds (except *Grapes*) than since I came into the *Bishoprick of Durham*. And the Want even of *Grapes* is owing to such Causes as may easily be remedied: For it is but lately, that the Gentlemen have had Courage enough to plant many; and where any Vines are found, they are either of the latest and worst kinds, or the Soil and Situation are not favourable; and which is still worst of all, very few Gardeners know how to prune them.

And then again, as to the Times of ripening, where the Soil is good and warm, and the Situation well sheltered, as it ought, I see very little Difference between 51° and 55°. The first Year I came hither, I had a ripe *Apricot*, of the early Kind, sent me the last day of *May*, and on the same day a Dish of young *Carrots*, reasonably large, sown in the Spring; and in the Year 1724. when my Lord Bishop came to *Aukland* the first Week in *July*, he had an handsome Present of large *Turkey Apricots* full ripe sent him from *Lumley-Castle*, the Seat of the Right Honourable the Earl of *Scarborough*. There is little Judgment to be made of Climates and Soils from any of the artificial Ways of raising Fruits, which



which are practised round about *London*, to the Surprise and Wonder of many; who do not consider, that in a *sheltered* Place all those Curiosities may be as easily had in any Part of *England*, and would turn to as good account, were the Markets like those of *London* (where every Novelty quickly meets with a Purchaser) ready to take them off.

Neither can I see at present of what Use the ingenious Mr. *Hales's* Observations, made from *Thermometers*, can be, nor what certain Judgment can be formed from thence relating to the Difference of the Sun's Heat for ripening Fruits in different Climates. I have formerly published Tables of the true and real Quantity of the Sun's Heat in several different Latitudes, I have given the same corrected above, and thereby demonstrated of what Quantity the Mathematick-Difference is in three or four Degrees. The greatest and most considerable Difference of Heat and Warmth for ripening Fruit arises from the Nature and Circumstances of Soil and Situation; from a Place lying on the South or North side of a Hill; from its being on the top of a cold Hill or in a Vale; from its being sheltered or not sheltered from Winds; from its lying on a cold Clay, or on a warm Sand or Gravel. These are the Circumstances chiefly to be regarded.

For instance; It is plain to a Demonstration, that a Garden lying on an easy Slope on the South side of an Hill, receives more of the Sun's Rays than the same Quantity of Ground lying on a Plane, and indeed hath more real advantage of Heat from the Sun than several Degrees of Southern Latitude would give it, *ceteris paribus*. And the Argument is stronger still if the Ground slope to the North. The same thing is to be said with respect to cold Clays and warm Gravels; the being guarded or not guarded from Winds. I remember several Years since I was at a Place called *Margaret Overton* in *Rutland* (which is about the middle of *England*) in the latter end of *August*; and then the *Merella-Cherries* against a *West Wall* began only to be red on one side, the Place standing on a Hill exposed to Winds from every Quarter, whilst at the same Time in the neighbouring Place in the Vale, I eat excellent *Peaches* and *Nectarines*; and from what I have found since I came into the Bishoprick of *Durham*, I might have had the same Cherries on the same Exposition full ripe above a Month sooner.

I could name several Instances in this Country where the same Difference may be observed, and from the same Causes. At a Garden of the Right Honourable the Earl of *Scarborough* at *Lumley-Castle*, before mentioned; at *Chester*, the Seat of my worthy Friend, *John Hedworth*, Esquire; at *Branspeth*, the Seat of *William Bellasis*, Esquire; at *Beamish*, the Seat of *William Davison*, Esquire; at *Hilton-Castle*, the Seat of *John Hilton*, Esquire; which *last* is not above two Miles from *Weremouth*; and yet the Situation of *that*, and the rest before mentioned (besides several others, especially all along the River *Were* not mentioned) is so favourable, and the Soil so warm and good, that there is not less Difference than three or four Weeks in the ripening of Fruits, &c. between *those* and *mine*; altho' I lay in some sort of Claim to an Experience and Knowledge in the managing my Trees: And yet there are still several Places in this Country, and in the same Latitude colder and less favourable to Fruits than my own; by reason they have neither a good Soil nor any Shelter from Winds; the *first* of which Negatives is not my hard Fortune, though the *last* is.

I cannot but here take Notice (as an Instance of the favourable Situation of *Branspeth*) of the uncommon Extent of some well bearing Fruit-Trees there to be found in my Friend, Mr. *Bellasis's* Garden, *viz.* There is an *Apicot-Tree* there, whose Height is thirty Foot, and its extended Breadth is no less than forty four Foot. There are also three large *Pear-Trees* planted against the *Cattle Walls*; the one is a *Bergamot* (which every one knows is of the tenderer sort) its Height is forty one Foot, and its Breadth forty three. Another is the *Windsor-Pear*, whose Height is thirty three Foot, and its Breadth thirty. The last is a good *Pear*, and what they call in this Country the *Bishop's Pear*, whose Height is thirty three Foot, and its extended Breadth no less than fifty five Foot.

I have been the more particular on this Head; because great Impressions have been made on the Minds of unexperienced and injudicious Persons, who have received great Prejudices against the Doctrine (clear as it is) which I have here laid down; and will still be apt to fancy with my ingenious Correspondent, that nothing better than a *Currant* and a *Goosberry* or a *Plumb* can be had on the wrong side the *Trent*. And when such Persons come here amongst us, and taste our Fruits, they are apt to taste them with preconceived Opinions of their little Worth, and *Northern Relish*.

However, I am not willing to let this Discourse end or rest here neither, because the whole of this Matter is not yet set in a right Light. And indeed I have not met with any Author that has hit upon the true Reason of the Difference of Climates, and of the Want or Plenty of late Fruits.



*London* itself, and the Country for ten Miles round, hath indeed something to boast of with respect to Climate, on the account of the vast Numbers of People and Fires, which influence and warm the Air all round. But setting that Consideration aside, *Great-Britain* itself must be deemed and look'd upon as what it is, an *Island*, and an *Island* that is subject to many outward Misfortunes and Inclemencies of the Air, which the *Continent* is much more free from. All our Northern Islands we know (and we experience our own) to be subject to frequent Winds brought to us from every Sea all round. We also experience much greater Uncertainty of Weather, more Clouds and less Sun-shine, than they who live on the *Continent*, as every one knows, who hath experienced the Difference by seeing and observing both. So that although there is a Remove from an *Island* to a *Continent*; from an *Island* subject to continual Clouds, cold Winds, and great Uncertainty of Weather, to a *Continent*, whose Air is generally serene, and whose Springs especially are warm and favourable to the Fruits of the Earth. Whereas it is a quite different Thing when you remove three or four Degrees from one Part to another of an *Island*, every Part of which is equally subject to Clouds and Winds: 'Tis to little Purpose *here* to talk of wanting in the North of *England*, the Sun's Meridian Altitude, or the benign Influence of the universal Genius of Vegetation; when, alas! the whole *Island* wants it. Every one who has been abroad in *France* or *Spain*, &c. and hath observed the Serenity and more equal Temperature of their Air, know that they have seldom many entire cloudy days together, as we have sometimes several Weeks, and that if we have one serene day of Sun-shine they have ten; which occasioned that merry Reflection of the *Venetian* Ambassador in King *Charles's* Time, who, when he was ask'd by his Friend going away to *Venice*, if he had any Commands, gave his Service to the Sun; having, during his Residence of three Weeks, been never able to see him or make his Complements to him.

Upon the whole; it is on all hands confessed, that there is a Difference of the Sun's Summer Heat in different Latitudes, although not near so much as People are wont to imagine in three or four Degrees; but then that Difference is much less to be discerned in an *Island* than in the *Continent*, for the Reasons given above. The Sun is a Blessing to Vegetation when and where-ever it shines; in the *Continent* this Blessing they enjoy in Proportion to their Situation and Climate; we that live in an *Island*, though we have Mathematical Reasons to expect a sufficient Influence of the Sun to ripen our Fruits, have the Misfortune of almost continual Clouds which intercept the Sun; so that its Influence, such as it is, we want, we have it not; which is the Complaint of the whole *Island*, and should silence all Triumphs of one Part over another on account of Latitudes; whereas the best and truest Reason of Difference between good and bad, between fruitful and unfruitful Places, is (as I have above observed) to be taken chiefly from the Nature of the Soil and Situation.

In short, you cannot much more expect success in gardening on the elevated Plains of *Salisbury* or *Honslow-Heath* in 51° than you can in the *Western Fells* or open *Wastes* in 55°, in the Bishoprick of *Durham*. Both are left naked and exposed to the Rage of merciless Winds; though (as I have in another Place observed) I think they are more raging in the North, by reason of the Narrowness of that Neck of the *Island* between the two Seas.

As a Corollary from the whole Doctrine here laid down, we see the true Reason between the Summer Heats at *Moscow* and those at *Newcastle*, both lying in the same Latitude of 55°. The first lieth in the middle of a large Contient, where the Air is generally serene, and the Sun powerful, according to its Meridian Altitude, insomuch that Melons *there* are raised with little Care and to great Perfection; whilst in the same Latitude in the North of our *Island* (except in the best and most sheltered Places) few of those, or of the latest Fruits, with the utmost Care, are found to be good and well-flavoured.

From hence also we are taught the true Reason of that Goodness and Earliness of Fruit in our *Island* which we experience in some Summers, so much more than in others; that is to say, when our Summers prove (as sometimes they do) serene, dry, and hot; when we enjoy the Blessing of the Sun without any great Interpositions of Clouds, (the Effects of which are Colds and Wet) then we find the Excellence, as well as Plenty, of all our late Fruits; such as may even vie with those of *France*. As for Example, in those two remarkable Years 1718. and 1719. both the Springs and the Summers were so warm and hot

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\* Mr. Evelyn observes that the Peach was at first accounted so tender and delicate a Fruit, that it was believed to thrive only in Persia; and even in the Days of *Galen* it grew no nearer us than *Egypt*, of all the Roman Provinces, but was not seen in the City till more than Thirty Years before *Pliny's* Time. Even the *Damask Rose* itself



hot on the account of serene Sun-shiny Weather, that I remember in *Northamptonshire* we had the *White Muscadine Grapes* in great Plenty and Perfection by the middle of *August*, and all other late Fruits in Proportion.

Whereas, in most of the Years since, we have had throughout the whole Island such unkind, unseasonable Springs; such cloudy, rainy, cold Summers, that hardly any of our late Fruits (except where the Circumstances of Soil and Situation have been extraordinary) have come to their proper Maturity and Flavour; as it hath been more particularly remarkable the last Year 1725. when, as far as I can hear, there hath been no such thing as a ripe Bunch of Grapes throughout the Island, at least in the natural or unartificial Way.

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*self* (saith my Lord Bacon) is little more than a Hundred Years old in England. And (as my Author goes on) is was Six Hundred and Eighty Years after the Foundation of Rome, e'er Italy had tasted a Cherry of their own; which being then brought thither out of Pontus (as the Philberts were) did afterwards travel ad ultimos Britannos. *Evil. Disc. of Forrest-Trees*, p. 115.



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A  
NEW SYSTEM  
OF  
AGRICULTURE  
AND  
GARDENING.

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BOOK IV.

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*Of the Kitchen-Garden.*

**C**ONSIDERING how many have wrote upon this Subject, and how well it is at present improved and understood, every one almost that wears a blue Apron, thinking himself already thoroughly instructed, it might hardly be expected that I should enter into this, which is now no longer a Secret; yet forasmuch as every Day's Experience adds some Degree of Light to a practical Art, I flatter my self that something acceptable even in the Article of the *Kitchen-Garden* may occasionally be delivered, that may either strike the Fancy or inform the Judgment of the Curious. However, I shall take Care, so far at least, not to impose upon the Publick, as to dwell on trifling Things, or to enlarge on Things already well understood.

C H A P



## C H A P. I.

*Of Melons, Cucumbers, Pumpions, Gourds, &c.*

**T**HE several kinds of *Melons* being reckoned the best Fruit in the Kitchen-Garden; and now every Day, as they are better known and easier raised, are much coveted by most curious Palates, I shall begin with a plain Description of the best Sorts, with some easie Instructions how to raise them; without confounding the Reader with all the different Methods, which some by way of Singularity affect to practise.

There are some of the large *Melons* that are good; but the *biggest* are not generally the best. However, it is with this Fruit as with most others; that which *pleases* one *Palate displeases* another. It is proper to procure some of the Seeds of the best and most approved Sorts, both of the *smooth*, the *wrought*, and the *rib'd* Kind, from *France*; that when you have found the Sorts that please, and will ripen well and kindly, you may stick to those, by carefully preserving their Seed; which Seed however should not be made use of till it be at least three Years old: For *new* Seed is apt to throw out large and strong Vines, but is seldom prolific; whereas the Seeds of *Melons* and *Cucumbers*, which have been kept eight or ten Years, generally produce Vines that are *close-jointed*, and more subject to produce Fruit. I have known the Seeds of *Melons* kept fourteen or fifteen Years, and have grown and answered very well.

But because a well chosen *Meloniere*, and a Succession of regular *Hot-Beds* are two things absolutely necessary for the Production of good *Melons*, it will be necessary to give distinct Directions concerning them, For without the *First*, viz. a well-chosen *Meloniere*, all future Diligence in other Particulars would be in vain. Chuse out therefore a Place in your Kitchen-Garden the most secured from pernicious Winds, about twelve or fourteen Yards square, and this you are to enclose with a Reed-Hedge eight or ten Foot high, well supported with sufficient Stakes or Posts fixed in the Ground, lest the Winds overturn them: But because Reed-Hedges are not of above seven or eight Years Continuance, it will be very convenient for more lasting Use to plant Hedges within the Enclosure, that may be growing up to answer the aforesaid Purpose. *Yew* and *Holly* are the best, and with a little Patience become impenetrable Defences against the Winds all the Year; but *Elm* and *Hornbeam* do very well.

After this Care is over, the next thing to be done, is to provide a Succession of regular *Hot-Beds*; for without the Assistance of these, our Climate seldom proves so kind as to afford ripe *Melons*, at least in any Quantity. Though I remember about twenty Years ago I once tried, and put a *Melon*-seed into the naked Ground on *May-Day*, and from that I had an exceeding good *Melon*, the fourth of *September* following. And indeed would our Summers prove but favourable enough, we might then expect that true Relish of the *Melon*, which the Southern Countries justly boast of; where they naturally grow like *Turneps*. For, as I have elsewhere \*observed, pure wholesome Mould gives a sweet Taste to all Sorts of Plants; whereas Dung, though it helps Vegetation, yet contains many noxious heterogeneous indigested Juices, which give strong and unfavoury Tastes to every thing sowed upon or planted in it.

However, since so delicious a Fruit as the *Melon* cannot ordinarily be had without the Assistance of the *Hot-Bed*, it is well worth while for those who can afford Hands and Attendance to be well provided in this Article; and although the Business of the *Hot-Bed* is now generally pretty well understood, yet I shall lay down these following plain and short Directions.

It is well known that only the Dung of Horses, Asses and Mules is fit for the Purpose of a *Hot-Bed*, the Dung of Oxen, Cows, and Hogs, retaining little or no Heat when laid together in Heaps. A convenient Quantity therefore of the former, of the last three Weeks making in the Stable, should be reserved and laid in a Place by itself. In the first

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\* *Cent. Recreat.* p. 89.



Week in *February*, mark out a Place in the *Meloniere* a Foot more extended every Way than the Frame you intended to set upon the Hot-Bed. (suppose eight Foot long and four Foot wide) facing the South; then take out the Earth six Inches deep from this oblong Square, and let the Dung be brought by one Man in a Barrow, whilst another shapes the Bed; not in Hills and Hollows, but regularly and evenly, *treading* it all the while, till at last it be four Foot high from the Foundation, when four or five Inches depth of Earth is laid upon it. Artificial Earths or thorough rotten Dung are generally used; but the richest (not Sandy but loamy) *untried Earth* that can be got I prefer. The Bed thus prepared (if the Dung is most of it new and fresh) will not have lost its scorching Heat in less than eight Days; and therefore nothing must be sowed in it till *that* is over. It is thought by most adviseable to have a thin Coat of Sea-coal Ashes laid upon the Bed before the fine Earth be introduced; because *that* is found to retain the Heat, especially if the Mould itself be pressed down hard with the Hand as it should, and after that remain five Inches deep: For want of which the Roots of the Plants frequently reach the Dung, which is Poison to them.

But forasmuch as no Hot-Bed can be supposed, without some Help, to maintain its Heat long enough to bring what we plant upon it to Perfection; therefore when it begins to grow cool, the common Practice is to cut away the Sides of it slopewise, adding fresh Dung to recover its lost Heat. This is called *Backing* or *Lining* of a Bed. And this the diligent Gardeners will repeat five or six Times in a Season, as they see Occasion, rather than make fresh Beds, which occasions a Remove of the Plants and is consequently a Check to them. However, this leads me to repeat a Contrivance of some Gardeners, which I have formerly \* mentioned: And may perhaps deserve still to be improved.

“ Instead of making the Glass Frames, as is usual, open at the Bottom, they may be  
 “ made with strong Wires crossing one another, so as to be able to support a Bed of  
 “ Earth four Inches deep for the several Plants to grow in. And thus the whole may be  
 “ lifted by four Men from one Hot-Bed to another, as Occasion serves. This Method  
 “ hath these two considerable Advantages attending it. First, this saves the Trouble and  
 “ prevents the Danger of *transplanting*, which *often* proves fatal, but *always* a Check to  
 “ the Growth of these tender Plants. Secondly, here is no Intermision in the Growth  
 “ of the Plants, nor any artificial Heat of the Bed wasted, which in the ordinary Me-  
 “ thods cannot be avoided; for there you must wait seven or eight Days till the great  
 “ Heat be abated, lest the tender Roots of the Plants be scorched: Whereas in the Case  
 “ before us, you may allot just what Degree of Heat you please; for when the Heat  
 “ is too violent, the Frame may be placed something hollow from the Bed; when it  
 “ abates, it may wholly rest upon it: And when the Bed grows too cold the Frame may  
 “ be carried to another.

Beside these, there are other Sorts of Beds made of long Dung fit to receive the Plants raised in the other; these are called *Deaf-Beds*, being made almost wholly *within the Ground*, and therefore will give only a *sweating Warmth* to the new-removed Plants for a little Time till they have just taken root, and can shift for themselves, only with the Help of Bell-Glasses. These Beds should not be made till the middle of *April*, that the Summer may advance Time enough to forward and perfect the Fruit.

If there should at any Time happen to be a Defect or Want of good Dung from the Stable, there are some other Materials which will cause a sufficient artificial Heat, *viz.* Straw steeped in Pond-Water two or three Days, Grass, Weeds, and Cole-Ashes, Grains of Malt, Tanners Bark, damaged Bran made wet: Any of these thrown together in a Heap, and well watered will ferment, and give a regular Heat and Warmth, proper for accelerating the Growth of tender Plants.

After the scorching Heat of the Bed is over (which may be discerned by a Finger thrust in) then is the Time to put in the Seeds, Melons at one end, and Cucumbers at the other; if the Bed be in good Temper they will come up and be fit to plant out four Inches apart about a Week after sowing; where they are to remain till the second or third Joint appears, when the prime Leader is to be pinch'd off from each Plant; and upon their careful Remove into a fresh Bed, they will quickly put out three other Runners, which commonly produce Fruit plentifully.

About the latter end of *April* the Melon Plants thus raised will be fit to plant upon Ridges four Foot wide in Holes, two or three Plants in a Hole, and the Holes are to be four Foot asunder. Some provide an Instrument of Tin, something of the Shape of a

\* *Gent. Recreat.* p. 96.



Spoon, wherewith to remove the Plants from one Bed to another without much disturbing the Roots; and a Dexterity in doing this is of great Advantage to the Plants. Sprinkle the Plants with Pond-Water, and cover them with Glasses: Immediately upon which, Mats or Straw should be laid round the Glasses to keep the Plants from withering. For though the Sun be the Life of Vegetation; yet to every thing weak, or newly removed, it often proves fatal, by its overpowering Glory. Cucumbers are to be managed much after the same Sort, only they require *no pruning*, and *more watering*.

About the latter end of *May* they will be pushing strongly forward, and then is the Time when the Earth on the Ridges, especially round about the Plants, is to be trod *hard* down, the *harder the better*, to keep the Roots cool, and the Sun's Rays from penetrating too far. As soon as the dry Easterly Winds cease, the Glasses should be tilted up about an Inch in the middle of the Day to give them Air for two or three Hours, that by Degrees they may be hardened to the Weather.

Whether those called *false Blossoms* are the *Male* Flowers absolutely necessary to impregnate the others; and therefore should be let alone, I am not able to say; having not had sufficient Experience thereof, and withal not being thoroughly satisfied with Mr. *Bradley's* Hypothesis (probable as it seems to be) of the *Generation of Plants*. However, I think it is the surest Way to let the false Blossoms alone: For the Notion the common Gardeners entertain, that they weaken the Plant, is *trifling*. Nature seems to design them for some Office, by their dying away so soon after their first Appearance; as if having done their Duty, they were to retire. I am also inclined to think with Mr. *Bradley*, that the common Practice of handling so much and disposing the Vines in an exact Order doth a great deal of Harm: The Vessels in these Plants are extremely tender, and subject to be bruised by the least bending from their Place of natural Growth; and accordingly it is observed that both Melons and Cucumbers discover their first Fruit in Places and Corners least disturbed or thought on. The *Claspers* which Nature has furnished these Kinds of Plants with, are by no Means designed for their *climbing*, as hath been conjectured by some: They are manifestly *reptile* Plants. The Tenderness and Weakness of their Vines plainly demonstrate they are not well formed, and little able to support the Weight of their Fruit, or defend themselves by such weak *Claspers* from Winds and Storms; which of all things affect them most. Therefore what Nature seems to design by their *Claspers* is, that they may lay hold of every little Weed growing round them, that thereby the several Branches for Fruit may be held and preserved in their natural Order and Disposition without moving to and fro. And this Inclination of Nature we should ever follow.

After the greatest Part of *May* is over you may take off the Glasses, and uncover the Melons from ten in the Morning till four in the Afternoon, thereby to acquaint them with the Air, and by Degrees to fortify them against unseasonable Weather. But great Care must be had to guard them against sudden Storms of Hail and Rain: For too much Wet, especially at their Roots, occasions them to rot. But if the Weather prove exceeding hot and dry, you may water them in a Circle at some little Distance from the Root with Pond-Water impregnated with Deers, Sheeps, or Pidgeons Dung.

When the Plants are become strong, and throw out several Runners, let the best and strongest remain after being pinch'd off at the third or fourth Knot: But the weak Shoots, and such as grow *flat* must be entirely removed. When you perceive two or three Melons knotting and setting for Fruit upon one Shoot, stop that Vine, pinching it off at a Bud or two beyond the last Fruit; which when it is once as big as your Fist, you should lay upon a Tile, whereby to reflect the Sun's Heat, and to accelerate its ripening: And after that, watering should be discontinued, except in excessive Droughts, and then the Water should be administred only in the Alleys.

To know when a Melon is fit to be gathered, the Stalk will seem as if it would part from the Fruit; it will begin to gild and grow yellow underneath, and you will be saluted with a most agreeable Odour; but such as frequent the *Meloniere* judge it by the Eye, observing only the Change of their Colour and the intercostal Yellowness, which is a sufficient Indication of their Maturity. From the Time of a Melon's being fully set, to the Time of its ripening you may reckon forty Days; and those which are full of Embroidery and Net-work are commonly fourteen or fifteen Days fashioning ere they be ripe.

In gathering a Melon *a-la-mode*, the Stalk should be furnished with two or three Leaves for Ornament; neither should the Stalk be suffered to break off, lest the Melon languish and lose the Richness of its Flavour. If the Melon is to be conveyed to any distant Place, it should be gathered three or four Days before 'tis full ripe, if that could be guessed. But if they are to be used immediately thoroughly ripe, put them into a Bucket of Wa-



ter newly drawn out of the Well, just as you would treat a Bottle of Wine; since coming immediately from the *Meloniere*, they are *Sun-beated*, wanting that Quickness and agreeable Flavour which the cold Water gives.

In the Choice of a perfect good Melon, let it be neither too green nor over-ripe; let it be well nourished with a thick short Stalk proceeding from a vigorous Plant, firm to the Touch, dry, and of a Vermilion colour within. And its true Flavour is of that pitchy Mixture wherewith Seamen dress their Cordage. The Superstition of the Antients derived to some of our Moderns with Respect to the Moon, and the Approach of Females is very silly and ridiculous. But from *weak Minds, Superstition is hard to be rooted out.*

*Cucumbers* are sown and raised much after the same Method with Melons. There are several Sorts of them; but the *prickly* Sort is accounted the best. They must be plentifully watered both on the Hot-Bed and Ridges, if you would have them produce Plenty of Fruit. They are in Perfection a little before they begin to turn Yellow. The first ripe both of these and of the Melon ought to be chosen for Seed: But the Cucumber designed for Seed should be suffered to grow till the Frosts come.

*Cucumbers* designed for pickling require no more Care than to chuse a Piece of natural Ground pretty rich and well exposed to the Sun; wherein make Holes in the Form of Basins about four Foot distant from each other; and the first Day, if the Weather be settled, or the first Week in *May* sow the Seeds in them, not *sparingly*; for it is better to have Plants to spare, than to want, which often happens by being too *covetous*.

All the several Sorts of *Pumpeons* and *Gourds* should have some Assistance from the Hot-Bed, that they may come to their Maturity before the Frosts overtake them; in the beginning of *May* they may safely be removed to some very rich Bank, where they may have room to extend their Vines; where if they be well watered, especially during their Fruiting, plenty of Fruit may be expected, and of a prodigious Size, sometimes weighing eighteen or twenty Pound; whatsoever is wrote upon the Fruit with the Point of a Pin, when it is small, will be vastly enlarged as the Fruit encreaseth, and appear prettily visible in Ribs. So the Lover in his Gaiety silently address'd himself to his Mistress, when he wrote upon the young Gourd,

*The Rhind of every Plant her Name shall know,  
And as the Plant extends my Love shall grow.*

They should be gathered about the latter End of *August*, and carefully laid to dry in the Sun; but the Frost quite spoils them. Some mix them with the sharpest kinds of Apples for the Kitchen; and others in a time of Scarcity, especially after it is boiled, mix the Pulp of it with their Dough for Bread.

Before I leave the *Meloniere*, it may not be amiss to say a Word or two of *Mushrooms* raised in an artificial Way. They are doubtless produced from some Putrefaction in the Earth. We are told of near an hundred different Kinds, besides those very minute Sorts discerned only with the Microscope in the Mouldiness of Fruits and Liquors; which last Kinds are so quick of Growth, that (as Mr. *Bradley* observes) in less than twelve Hours time they are perfected, and shedding their Seeds, several Hundreds of the same Kinds immediately Vegetate, whence it is that Mouldiness so soon overspreads those Bodies it once infects.

There are *Troustles* found at *Rushden* in *Northamptonshire*, and *Morelles* in some Parts of *Wiltshire*; but there is but one Kind of Mushroom properly so called, which is edible, and those are found in most Places in *England*; especially after a wet Season in Autumn. But the artificial Way to have them most Parts of the Summer in a Garden is, by preparing a Bed of long Dung from the Stable, putting some short old Dung on the top, four Fingers thick: When the great Heat is qualified, scatter all the Parings and Offals of such Mushrooms as have been dressed in the Kitchen, together with the Water wherewith they were washed. The same Bed will serve two or three Years, and will assist you in making another. Instead of Horse-dung some have of late used old Thatch, which is observed to turn musty and to grow mouldy sooner than Horse-dung, and consequently to produce Mushrooms quicker and in greater Plenty. The old Melon-Beds, if well watered in the Spring, seldom fail to produce Plenty.



## C H A P. II.

*Of Artichokes, Chardons, and Asparagus.*

*Artichoke.*] **T**HE *Artichoke*, tho' of the *Thistle* Kind, is one of the most excellent Fruits of the Kitchen-Garden, and recommended not only for its Goodness in all the various Ways of cooking it, but also for its continuing near three Months in Season. Of these there are several Sorts; chiefly the *red*, the *violet* and the *green*, which *last* for its Largeness is generally most admired and sought after.

They are propagated by Slips from the old Roots in the Beginning of *April*; which Slips should be planted in as rich Soil as possible (*untrie*d is best) at four Foot asunder in Rows and in the *Quincunx* Order. When you take off the Slips, only three or four Heads should be left on the old Root, which should not be all at once uncovered, but gradually at several Times, lest the cold Winds and sharp Mornings pinch them too much. They need little Culture before Winter, but to be kept clean from Weeds; and the young Plants must be carefully and frequently watered if the Weather prove dry: In *November* the Tenderness of this Plant expects Relief, which is either by putting long Dung round every one; or else to make Trenches betwixt every two Ranges, covering them within a little of their top with the Mould. This last Method is the most expeditious, and except in very long and severe Winters is found sufficient. The new-planted Sets should not be suffered to bear the same Year; for thereby the Roots are often endangered; and every fifth Year there should be a Renewal; for it is a Plant that soon impoverisheth the Soil, and then the Fruit becomes small.

The old Roots, which are not accounted of, are commonly made use of to make what the *French* call *Artichoke Chards*; for which Purpose they tie them and cover them up at their whole Length, with Straw or old Dung, which whitens the cotteny Sides of their Leaves and makes them fit for Use after boiling.

*Spanish Chardon.*] The *Spanish Chardons* are propagated only by Seed sown in *May* (and not sooner) in prepared Trenches or Pits a Foot wide, and about six Inches deep of fine Mould. After they are come up, they must be well watered: And towards the End of *October*, when we would blanch them, we must tie them and cover them up with dry Litter, well twisted about them, so that the Air cannot get at them. In about fifteen Days they will be whitened and fit for Use, boiled as the *Artichoke Chards* before mentioned. The *French* and *Spaniards* use the Flowers of these *Chardons* instead of *Rennet*; for being dried in the Air, they quickly and readily turn and curdle the Milk.

*Asparagus.*] *Asparagus* is so necessary a Part of the Furniture of a Garden, and so early a Dainty in the Spring, that its Management and Culture justly deserve a particular Enlargement. It is raised from Seed sown in the Spring on some well prepared Ground; and after it has stood two Years in the Seed-Bed, the Plants are then fit to be removed into a regular Bed; where if rightly prepared and managed, they will continue good and strong for fifteen or twenty Years; especially if the Soil be naturally rich and sandy. There ought to be great Care taken to gather the Seed from some of the strongest Plants, for therein consists a great deal of the expected Success of having a large Kind.

It is not desirable to have the Plants either too big or too little; but when you have them ready for the Purpose, whether of one or two Years Growth, mark out a Piece of Ground, suppose eight Yards long, and four Yards wide. Take from hence *entirely* the Mould for twelve Inches deep, filling it up again with the best *untrie*d Earth that can be got to the same Level it had before.

Then some Time in *November* or (if that cannot be) in *February*, and not later, set four Rows of Plants in each Bed at twelve Inches asunder in the *Quincunx* Order, allowing two Foot betwixt each Bed for a Path; as may be plainly seen and understood by the Figure following. But instead of making Holes (as the usual Way is) to put the Plants in, lay them only upon the Surface, spreading their Roots, as near as may be, at equal Distances, and putting a handful of fine Mould upon each to keep them in their Places. This done, lay on some of the best and finest of the *untrie*d Earth at least three Inches thick, which will cover and plant them all at once.

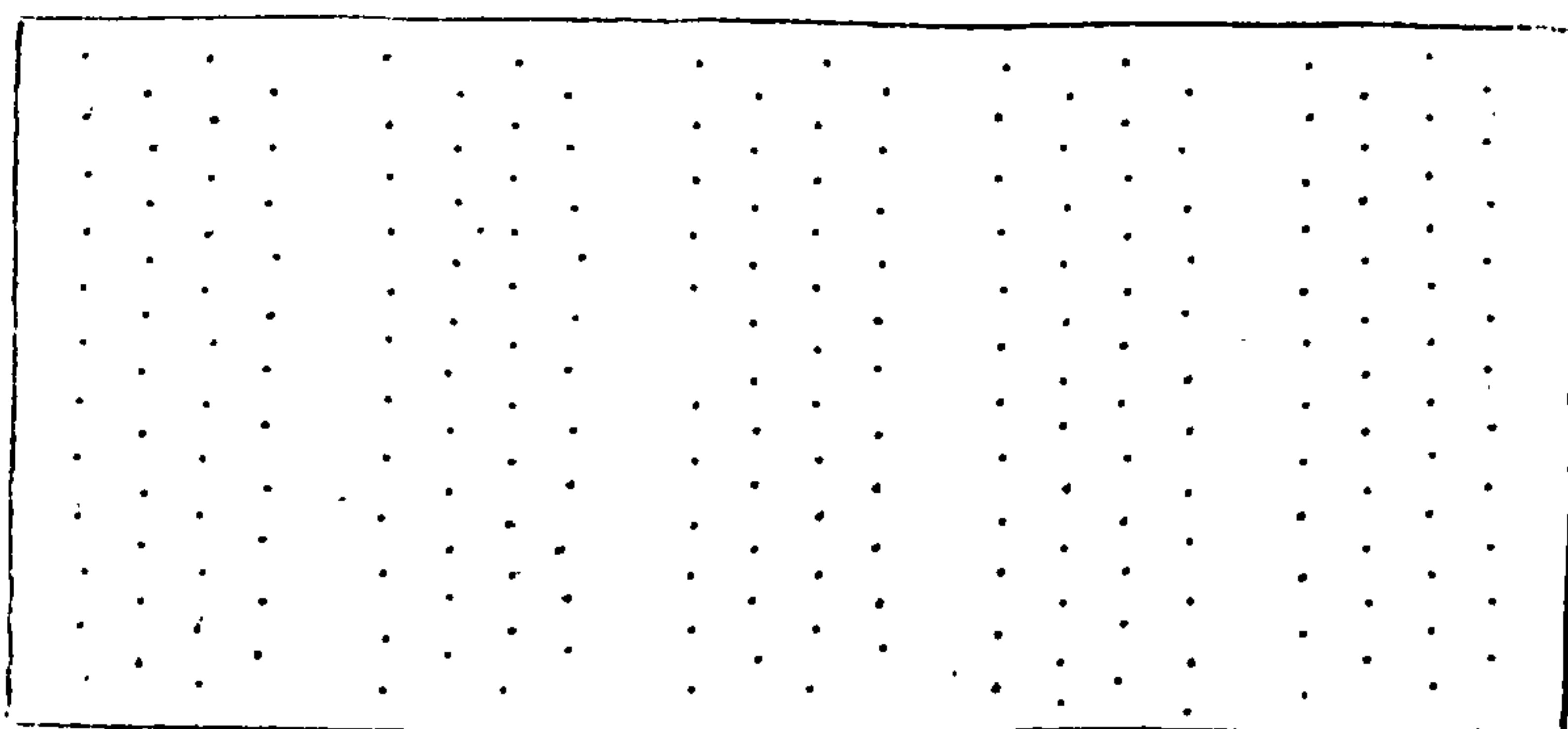


Your Bed thus made and planted will rise three Inches above the natural Surface; but *that three Inches* will subside and be lost in a Year or two; and therefore *new Earth* of about an Inch deep should be laid on every *Autumn*, together with a Sprinkling of Pidgeon or Hen-dung on the top of the Bed. And this is all the Covering that Asparagus requires or wants to defend it from the Winter Colds.

I take *November* to be a better Month to plant Asparagus in, than either *February* or *March*. For no Winter hurts it, if the aforementioned Care be used; and then it will be the better disposed to take root in the Spring before the dry Weather overtakes it, which often proves fatal to those Beds which are planted late.

*N. B.* The Asparagus should not be cut for Use till the third Year after Planting, and then also but *sparingly*. Its delicious Taste is mightily heightened by preserving their Verdure and agreeable Tenderness; which is best done by letting the Water boil before you put them in.

*An ASPARAGUS Bed eight Yards long and four Yards wide, containing one Hundred and Twenty Plants in the Quincunx Order.*



Those who are curious and covetous to have Asparagus during the whole Winter Season, must sow and make Plantations every Year for a Succession; because such Plants as are forced in the Hot-Bed serve only for that Season, and afterwards die and are cast away. The Method of raising it in that *artificial* Way is this. Make a large Hot-Bed rising about two Foot high: Cover it with *untried Earth* six Inches thick, and limit the Edges with Straw-bands. Upon this plant your Asparagus Roots, taken from the Nursery of three or four Years old, as close together as may be, without much regarding to prune their extended Roots. This done, cover the Plants two Inches thick with the same Earth, staying a Week before the Frames are put over it; when two Inches more of Earth must be laid upon the whole Bed. In about ten Days the Buds will begin to appear; but it is always to be remembered, that the more Air the Season will suffer them to have, the *better* and *greener* the Asparagus will be.

A Bed thus ordered will last good four or five Weeks; especially if, as the Bed begins to cool, some fresh Horse-Litter from the Stable be laid upon the Glasses every Night, which will much contribute to the Forcing the Buds and the Continuance of the Heat. Those who are Lovers of this Article continue this Work from *November* to the latter End of *March*, when the natural Beds begin to discover a much better Dainty.

I cannot avoid here taking Notice of and reproving the vulgar Method of cutting the Heads so much within the Ground to no good Purpose, and yet to the hazard of wounding the Tops of others just beginning to sprout. All that Part of the Shoot which is within the Ground is of no Account; for it is neither pleasant to the Eye nor grateful to the Taste. The best way therefore is to cut none but such as are of a proper Length above the Ground; and then the whole or at least the greatest Part will prove *tender*, *green* and well *tasted*. The aforementioned common Practice now reprov'd, together with the Way of loading in so much Dung is the Reason that the *London Asparagus* has neither Taste nor Beauty.

Every Year about *Martlemas* the Stems should be cut down even with the Surface, reserving the Seed which grows upon the strongest: But if Novelty excites a Desire of tasting them again in Autumn, where there are plenty of Beds, you may cut the Stems down the latter End of *August*, and about a Month after, especially if Rains come, you



will find a sufficient Quantity putting up to gratify Curiosity. This indeed something weakens the Beds; but where there is Plenty, that will not be thought an Objection.

Asparagus requires at least two Dressings; one in *November*, and the other in the beginning of *March*, when the upper Surface should be carefully stirred and raked; and what can be spared out of the Alleys should be thrown upon the Ridges, the better to cover the Roots, which are apt to rise upwards. It is common to sow a Crop of *Onions* on the first Year's planting; and the Practice cannot be blamed, *Onions* striking little Root down-wards.



## C H A P. III.

### *Of esculent Roots useful in the Kitchen.*

**U**NDER this Head are commonly reckoned the *Carrot*, *Radish*, *Parsn.p*, *Turnep*, *Beet*, *Scorzonera*, *Horse-Radish*, *Potatoes*, *Jerusalem Artichokes*, *Onion*, *Leek* and *Skirret*.

*Carrot.*] The *Carrot* is of two Sorts, the *yellow* and the *red*; the latter of which is much to be preferred. They both delight in a rich sandy Soil without Dung, which makes their Roots forked. Those that are designed for Winter Use and the early part of the Spring, are sown in *August*; but the Summer Crop should be sown in *February*: After the Ground is well dug and prepared, sow them on the Surface in a still Day, and because the Seed is *light* and *feathered*, the best Method is to tread them in all over, and after that gently to rake the Bed, by which means they will lie and grow the more regularly: But they must be carefully weeded when they are got into four Leaves.

*Radish.*] The *Radish* is commonly sown promiscuously among other Roots in *March*. It likewise covers a Sand or light Ground well wrought with the Spade. The earliest Crop should lie exposed to the South; but what are intended for the Summer Months should be sown under a North-Wall.

*Parsnip.*] The *Parsnip* affords a large sweet Root, very pleasing to some and displeasing to others. It is sown and managed as the *Carrot*; but is not rightly fit for Use till the Frosts have entered the Ground. *Radishes* and *Spinage* are wont to be sown amongst them; because they will be ready to draw before the *Parsnips* begin to spread. And this is esteem'd a profitable piece of Skill in a Gardener, to understand how to double his Crop with such things as will not spoil one another. They need not be taken out of the Ground till *Christmas*, and then it will be proper to lay them in Sand.

*Turnep.*] The *Turnep* is esteemed an excellent, wholesome and useful Root. For besides the Profit which it brings to the Farmer in feeding his Cows and Sheep (of which I speak in another Place) it's an agreeable mixture at the Table, as a *Sauce* for most kinds of Meat for the three last Months in the Year. There are many Sorts of them, but the two best and most remarkable are the *long* and the *round* rooted. They are best tasted in a sandy or gravelly Soil. Those which are sown in the Spring are apt to taste strong, and are seldom tender and white: But when they are sown in *July* (though they may also be sown till the latter End of *August*) they will be in Perfection and ready for the Table by *Michaelmas*. They must be carefully houghed and sized at two different Times, which the Gardeners about *London* have a dextrous and expeditious Way of doing with an Hough about six Inches wide. The Seed should be raised from some of the best and fairest Roots transplanted.

*Beet.*] *Beets* are raised from Seeds sown in *March* in a light or sandy Soil; and to make them *long* and *fair* without being *forked*, they should be transplanted into regular Beds at proper Distances; but observe not to cut off the Tops. Before the Frosts came on, draw them out of Ground, and under some Shelter, bury their Roots in Sand to the Neck of the Plant, ranging them one by another somewhat shelving; from whence they may be drawn for use in the Winter as Occasion serves.

*Scorzonera.*] *Scorzonera* or *Spanish Salsifie* is a very pleasant Root, not much known till of late Years; of which there are two Sorts, the *Violet* and the *Yellow*, which differ both



both in Leaf and Flower. They are both equally good and esteemed very delicious: This Plant has the Preheminence above all other Roots, in that it doth not become stringy by lying in the Ground, tho' for several Years. And yet by their Continuance in the Earth they grow daily bigger, and are fit to eat at all Seasons, after the brown crusty Part of the Rind is scrap'd off, and are soak'd a while in fair Water before they are boiled, to take off that little Bitterness, which they would else retain. The Seed should be gathered as soon as ever the Heads grow downy; otherwise the Seed will be apt to be driven away with the Wind. The Time of Sowing it is in *April*, in some well prepared and deep Soil.

*Radish.*] There are three sorts of *Radishes*. The *Horse-Radish*, which continues many Years and will encrease much by transplanting the Roots of any Pieces thereof at *Michaelmas*. It is a Root *useful, tasteful* and *wholesome*; and therefore should be particularly taken Care of and encouraged for the Use of the Kitchen. The small *annual Radish* is a Root much valued by most for eating raw and mixt with the Sallads. Those who are Admirers of it say it is called *Radish* or *Radix*, by Way of Eminence or Excellence, *the Root*. The tenderer and shorter it is, the better; and therefore those which are raised in Hot-Beds are preferred, not only for their *Earliness*, but also for their better *Relish*. By regular and successive sowings, they may be had from *March* to *October*; but hot Weather always makes them eat tough; and therefore are most coveted in the Spring. The *black Radish* is worth little; but if any admire it, it is to be managed as the small one.

*Potatoes.*] *Potatoes* are generally thought an insipid Root; but when they are cultivated in a good mixt Soil, they are not without their Admirers: The smaller Roots or Knots are commonly preserved for a succeeding Crop, which in *March* are set at about eight Inches apart. About *Michaelmas* is the Time when they are first begun to be used, and they are commonly taken out of the Ground only as Occasion serves during the Winter.

*Jerusalem Artichoke.*] The *Jerusalem Artichoke* is a Plant easily propagated; and hardly destroyed. It has a much larger Root than the *Potatoe*, and is apt to eat watry and insipid. Is to be managed much as the *Potatoe*.

*Onion.*] *Onions* are almost universally esteemed in Sauces: By some in less, by others in greater Quantities. The two Kinds most coveted are the *Spanish* and *Strasburgh* Onion. The *first* is large and sweet-tasted; the *other* is stronger and most lasting. Both require to be sown the Middle of *February* in rich Garden Soil, or on an Asparagus Bed of the first Year's planting. They are to be first thinned for Sallads, and afterwards kept clean from Weeds: And because during the great Heats of the Summer, many of them will be apt to run upward into *Spindle*, if not to *Seed*; the best way to prevent that, and to make them bottom well, is either to tread them flat with the Feet, or to flat them discreetly with the Back of a Spade. If the Summer prove any thing favourable they will be ripe in *August*, when they should be pulled up in dry Weather to remain on the Beds to dry thoroughly before they be housed, otherwise they will quickly rot: After which they should be spread thin on the Floor of some covered Place, and with this Care many of them will remain good till *April*. The best and largest ought to be reserved for Seed to be planted out in *February*; and after they are two Foot high, must be secured with Sticks from the Fury of the Winds. Let no wet get to the Seed-Vessels after they are cut off, and are laid to dry in the Sun; for the least Moisture makes them sprout, and then they are good for nothing. In the Beginning of *August* a Winter Crop called *Scallions* may be sown in some well sheltered Place; and these will be of use, when the others are gone, in the Spring.

*Leeks.*] *Leeks* are sown in *February* or *March* as the *Onion*, and in *July* are to be transplanted in Rows as deep as may be, that you may expect the more of the white Stalk; and still as they grow you are to trench up the Ground to them to augment their *blanching*. Some also when they have done graving lay them in the Rill one upon another, leaving only the very Extremities of their Leaves out of the Ground; for what is covered will become white, and so the whole Plant becomes both bigger and better. *Garlick* and *Escalots*, *Chives* and *Rocamboles*, are easily propagated from the Cloves or Off-sets in *March*, and will be fit for Use as soon as the Blade turns yellow.

*Skirret.*] The *Skirret*, though an excellent Root, is very much neglected; possibly because it is not yet so well understood. It may be raised either from Seed sown in *March*, like other Roots, or the Off-sets from the Roots may be transplanted in that Month. A strong rich Soil much contributes to make the Roots large; especially if they be well watered.



## C H A P. IV.

*Of Colliflowers, and the several Kinds of Cabbage.*

*Colliflower.*] **T**H E *Colliflower* is universally liked and admired, as the sweetest and most agreeable Sauce to all boiled and roasted Meats. And if the Plant is managed with Skill, it is a Delicacy may be had from the latter End of *May* till the Severities of the Frost take Place. The Seed of this Plant used to be fetch'd from *France* and *Spain*; but of late Years, by Means of Glasses and Shelters, we bring the Seed to great Perfection in *England*: But it should be saved from such Flowers as were large and white. The earliest Flowers in the Spring are obtained from Seed sown in the Middle of *July*, or the very Beginning of *August*. At both which Seasons it is proper to sow Seed for an early Crop; because a dry, or a very wet Season after Sowing makes a great Alteration with Respect to the Plants running or not running to Seed too soon in the Spring. *N. B.* The Seed of two Year old is best. About *Michaelmas* they will be fit to transplant. And this Remove should be to a well sheltered Place under a South-Wall, setting them four or five Inches apart; with a View of removing the greatest Part of them into proper Beds in the Spring, when the Danger of the Frosts are over. But it should be well taken Notice of, that under the aforesaid South-Wall, there should be left Plants at about two Foot asunder, which should suffer *no Remove*; because *these* will be forwarder by at least a Fortnight, and may be expected to *pome* the latter End of *May*; especially if they have been forwarded by Glasses in the early Part of the Spring. But that there may be a proper and regular Succession of those which are raised in Autumn, it is a very good Rule, and ought to be taken Notice of, that a provident Gardener will take care to transplant some *late* in the Spring under some North-Wall, or sheltered Place, where they may not have too much Sun, and where, by the Help of Water, (of which they are great Lovers) they will prove good, even in the great Heats of Summer, which otherwise would make them grow hard, tough, and insipid. Every one knows when the Blossom begins to appear, it is proper to break some of the great Leaves to lay over it; because either Rain, or the Heat of the Sun, or both, occasion the Flower to turn *yellow*.

The Method and Practice of raising these Plants in the Hot-Bed at Spring so well known, excellently answers the Desire of a Succession, and often supplies the Loss of those Plants, which have been destroyed by the Severity of the Winter; for if they are raised here with Care and Skill, they will produce *almost* as early Flowers as those sown in Autumn. However, it is proper to sow in the Spring, not only in the Hot-Bed, but also in the naked Ground upon some fine-fitted *untried Earth* about the Beginning of *April*, for these Plants will begin to *pome* by that Time the Frosts come on; and then such Plants should be taken up with as much Earth as possible about their Roots, and set upright in Rows together, in Sand in some Cellar or Green-House or other sheltered Place: And here the Flowers will enlarge themselves, and be fit for Use a great Part of the Winter.

*Brocauli.*] The *Brocauli* is an *Italian* Plant, brought lately from *Rome* by the present Earl of *Burlington*, who has given it a Reputation among those who love Novelties, and have *Gustum Eruditum*. Although it is of the *Cauli* Kind; yet it requires a *particular* Management, and therefore *particular* Directions. Many, ignorant of the Plant, will be sowing it in the *Spring*; but it should not be sown till about *Midsummer*, and not much *after* neither; but that it may attain Strength to get over the Winter, which it will pretty well bear, and be fit for the Kitchen in *February*, *March* and *April* following. It is an hardy Plant, and must be managed as the *Cabbage*, *Savoy*, or *Colewort*. When it is near its Perfection as before, you'll see an Head in the Middle almost like a *Colliflower*, which is highly esteemed, and excellent to eat after it is boiled as the *Savoy*; but of a much higher, sweeter, and finer Taste: But besides this Method of gathering and eating it, there is also another Way of managing and eating it at great Mens Tables: For after the Head is cut off, or that it offers for *Seed*, both in the Head and Branches from the Stem, those Sprouts should be cut off at about six Inches long, and being stripp'd of their Leaves till you come toward the Top, they should be tied in Bunches, and so boiled like *Asparagus*; and as you cut the first Sprouts, more will succeed and put forth, which must be served like



like the first. *N. B.* The outer Coat or Skin should be peeled off, and they boil in about four or five Minutes.

*Cabbage.*] There are various sorts of *Cabbages*, all of them useful in the Kitchen. The *white sort* comes the earliest; and therefore is best for Summer Use; if it be sown the latter End of *July*, and stand the Winter, it hath been found to ripen in *May*, and will be very large; insomuch that the Head of one of these planted in a rich loamy Earth, hath weighed above forty Pounds. The *Dutch Cabbage* is very sweet, and soon ripe, and so is the *Russia*, which is the least and most *humble* of them all; but is hardy and pleasant Food. The *Savoy*, if sown in *March*, and not eat till *Christmas*, is excellent. But above all there is a *large-sided Cabbage*, which is in great Esteem for its Tenderness, Melting, and delicate Taste: But it will not bear the Severity of Cold, and therefore should not be sown till the Beginning of *May*; and if it be transplanted and well watered in *July*, it will *head* in Autumn, and reward you with a very valuable Sauce; for it is speedily boiled, and even the grossest Part of them melts in your Mouth. It is observed that Broth made of them and eaten fasting, will gently loosen the Body, and which is a singular Quality attending them, they will never offend you.

The best Way is to plant every sort in Beds by themselves, to distinguish the Species, setting them up to the very Neck in good *untriaed Earth*, at two Foot asunder in Rows: And I cannot but here repeat the Excellence of *untriaed Earth* for the Purpose of improving the Cabbage; for in all or most of the sorts, it takes away that strong Taste and Smell so very offensive to most, and substitutes a Sweetness and Flavour that pleases every one. But yet it must be owned; that the very best sorts are apt to offend the Stomach with *Wind*, and therefore are reckoned by the Learned to be generally *unwholesome*; especially if eaten in any Quantity. The Seed of such as are intended to stand the Winter should be sown, as *Colliflowers*, the Beginning of *August*, and be managed much after the same Manner; only it may be remembered that *these* will generally bear more Cold, and are hardier than the *Colliflower*. It is very proper to hough up the Earth about each Plant in *April* and *May*, which will not only be a Means to clean the Ground, but to make the Cabbages to *head* the better. Be careful also to take away all the *dead Leaves*, as well that all may look handsome, as to avoid the ill Scents that proceed from their Corruption, which breeds and invites Snails, Frogs, and Toads, and such like Vermine, which greatly endamage the Plants.

When you *head* a Cabbage it is adviseable to cut slopewise, that the Rains may not so easily penetrate the Stalk to its Destruction; for from every Stalk may be expected such green and tender Sprouts, as will be reckoned a Delicacy in the Spring, much preferable even to the Head itself; which the *Italians* call *Brocauly*, and the *French*, *Des Broques*, eaten in *Lent* in *Pease-Pottage* and Intermesses at the best Tables. And indeed for ordinary boiled Sallads, they are then most acceptable, being the only Greens, except Spinage which the Cook has Recourse to.

If you intend to reserve the Seed let it be of the best sort, and from the fairest of the Kind. For which Purpose, after the Cabbage is stripp'd off its under Leaves, make a Hole in some dry Place in the Garden, wherein plant the Cabbage with half its Head above Ground and half under, moulding up the Earth so as to cover the whole. From hence in *March* or *April* the Flower-Stems will begin to break, and as they encrease they must be stak'd, till the Pods afford you plenty of Seed in *August*. Mr. *Evelyn* observes, that it is scarce an Hundred Years since Cabbages were first brought from *Holland*; and further saith, that Sir *Anthony Ashley* of *St. Giles* in *Dorsetshire* was the first who planted them in *England*. Both these and the *Colliflower* are subject to be much infested with Variety of Insects; but yet it is to be observed, that the more of the Winter Cold which they sustain, the less they are apt to be hurt by Insects of all the several Kinds.



## C H A P. V.

*Of Beans, Pease, Kidney-Beans, and other Pulse.*

*Beans.*] **B**E A N S are of several sorts. The *Spanish Bean* is usually sown for an early Crop; because it endures the Winter Colds; but it is by no means so good and well tasted as the common *broad Bean*. The first Sowing is usually about the Middle of *November*, in some Place well sheltered from the Winds; for it matters not whether they have much of the Sun or not; the uncertain Alterations of Thawing and Freezing, which they commonly undergo under a hot Wall, rather tending to their Destruction. Tall Hedges, or Trees at a Distance on the East, North and West, are the best and most approved Defence. But yet after all, a hard Winter often proves their Ruin. And it is remarkable, that although you set *Beans* the beginning of *November*, and they happen to stand the Winter, and set again the same sort at *Candlemas*, which is three Months difference in Time, there will *ordinarily* be found to be no more than a Week or ten days difference in the Time of *ripening*. So that the Spring Crop being what is to be depended on, and coming not much later than the other, the chief Care of the Gardiner is to have a sufficient Quantity, and gradual Crops of these of the large broad Kind: And he will have his Expectations well answered as to Forwardness and Plenty; if especially he take Care to steep the Seeds a day or two in Water taken from a Dunghil. For this hath been found to make them flourish exceedingly, and much advanceth their Growth and Time of ripening: Besides, they'll not remain so long in the Earth before they come up, and so the Danger of being eaten by Worms, Insects, and Mice is lessened, if not prevented.

They are usually sown after the Hough, or with a Stick in Lines two Rows together, with the distance of two Foot betwixt every such double Row; and Care should be taken to hough the Earth well up to their Roots before they blossom, which will greatly help their *setting* for Fruit. If it should happen so that the several Crops of Beans blossom too near the same Time, it would be very adviseable to cut down one of them within two Inches of the Ground, and will have a late and plentiful Crop in *September*. In gathering green Beans for the Table, they should not be stripp'd, as is usual, with the *Hand*, but rather cut off with a *Knife* to prevent great Damage often done to the Stalk.

Although the Ashes of the Bean-stalks burnt are greatly desired by the good Housewives; yet it is more desirable to have the Haum dug in amongst the Soil; for after it is rotted there, it will greatly improve it. Or if you would learn the Art of making Land improve itself (which is an Art may be learn'd in the Field and Garden too) sow Beans without any View of gathering their Fruit, and when they are in full blossom, dig them in altogether, Earth and Beans, without accounting it any Loss; for this Practice will improve your Land beyond Imagination, and doubly repay your Loss.

*Pease.*] The several sorts of *Pease* are vastly many, and they all require a less heavy or stiff Soil than Beans; for they will do well either in sandy or gravelly Land, provided it be not extremely poor. There is an early Hot-spur, called the *Henly-Gray*, which is usually sown the beginning of *November*; being very hardy and will endure most Winters under a good Defence; but the Pea itself is worth nothing, but that it comes early. The *white Hot-spur*, or Nine-Weeks Pea, (so called, because if sown on *May-Day*, it will be fit to eat in nine Weeks, some say in six after) is the very best of the *Hot-spurs*, having many good Qualities; is pretty hardy, an excellent Bearer, comes early, and boils very green and sweet. The *Dwarf white Pea* is proper to be sown in windy and exposed Places, being a Reptile. The *Dutch Admiral*, and the *Marrow Pea*, which are most excellent, should not be sown till *March* or *April*; but they require to be well supported, as affecting a Superiority; and then they reward the Owner with Plenty. These *last* should be sown much *thinner* than the rest, and the distance of one Row from another *wider*. Four Foot distance should be allowed for these, and two or three for the other sorts, taking Care frequently to hough the Alleys, and to cherish the Roots with new Earth. Some sow two Rows together, and then leave a distance of between two and three Foot for Alleys, still keeping sowing for a Succession of Crops till *Midsummer*, that so useful and acceptable a Dish may not be wanted at the Table, even in the beginning of *October*.

*Pease* are generally esteemed the *sweetest* and *most pleasant* of all Legums or Pulses; tho' eaten in Quantities they are not accounted the *most wholesome* Food, causing Wind in the Bowels and great Eructations; but more in some Constitutions than in others. The com-  
mon



mon sorts have been long acquainted with our *English* Air and Soil. But of late almost every Year we have new sorts, supposed to be sweeter and more delicate, introduced into our Gardens; but whether they are really better or their Reception be chiefly owing to a Love of Novelty, I will not pretend to say. We are told of no less than five sorts of Rouncivals, the *grey*, the *white*, the *blue*, the *green*, and the *maple*: Three sorts of Sugar-Pease, the *large white* and the *small white*, and the *grey*: And we have the *Egg-Pea*, the *Wing-Pea*, and the *Sickle-Pea*. But I shall not promise that many of these, with different Names, are not the same. However, it is plain from Experience, that most of these new sorts of late introduced amongst us are tenderer than the *Hot-spurs*, and therefore should not be sown till *March* or *April*.

Ground laid in deep Furrows, running from *East* to *West*, and Pease sown on the declining Part of each Furrow facing the *South*, will defend them from the Winds and Frosts in Winter, better than if they were sown on a Level. And it may not be amiss also to add here, that Pease, by the help of their Tendrils climbing on Sticks, will bear *more*; but lying on the Ground, will ripen *sooner*. So also a light Soil, if it be rich, will produce *fairer* Pease; but in a lean Soil, the Pease will be *more early* and spend better; especially such as are used when dry.

*Kidney-Beans.*] Although *Kidney-Beans* is an antient Food, and was held in great Esteem among the old *Italians*; yet it is not a Century since it was accounted an extraordinary Rarity in *England*. It is now indeed a known and much admired Food, either eaten by itself, or as a boiled Sallad to all sorts of Meat, both boiled or roasted; lasting in Season from the beginning of *July* till after *Michaelmas*; and it comes in sooner still, if forwarded by Hot-Beds, as the Method about *London* is.

There are reckoned to be above fifty sorts of *Harricots*, or *Kidney-Beans*; but the two most remarkable and approved sorts are the *Dwarf-kind*, or *Battersea-Bean*, which never runs high, and will do well without Staking; and another *white Kind*, which will grow near six Foot high by the help of Sticks; for all the sorts of them are *Convolvulus's*, but in their twisting turn *contrary* to the Sun, or as a Screw inverted, whereas *Corn bind*, *Hops*, &c. turn with the Sun, or as a Screw in its natural Posture for Use.

Eagerness to have this Delicacy early tempts many to sow them in the beginning of *April*: But yet it is to very little Purpose to sow before the beginning of *May*, because those sown a Month sooner will not have above two days advantage in their ripening; and then they are subject to great Hazards of Wet and Frost. They delight in a warm light Soil, and should be sowed like Pease in Drills, and at the same distance. It is with these as with the several sorts of Pease, if supported by Sticks they will bear *more* and *longer*; but if suffered to lie on the Ground (the Alleys kept clean) they will bear *sooner*. It is very proper to have a Succession of Crops, and to sow *some* every three Weeks till the middle of *July*; only it should be remembered, that in the very hot Season, that the Drills, when opened, should be well watered before the Seed is put in, the better to make them sprout and take root: For though they are impatient of too much Wet; yet neither will they grow, if they lie altogether dry.

The *painted* or *streak'd* Bean is of all others the hardest and soonest ripe, by at least ten days; and though some think it is not so good, yet I could never discern much difference, having nothing but a sweet and pleasant Relish. The *Scarlet* sort indeed eats something strong, though used in Pickles is incomparably the best, tenderest and greenest; and if boiled in two Waters, eats very sweet in the common Way. There is a very large and long Podded white Bean, which is yet no otherways better than the *small white* one (which is by all esteemed to be tender, sweet and delicate) than as it is larger.

We are told of another good sort brought from the Island, *Bona Vista*, which are by some esteemed excellent eaten *dry*. Our Summers do not in the natural Way bring them to Perfection; but doubtless if they were raised in an Hot-Bed, they would come to Maturity, and might be eaten in Perfection in the green Shell. There is also what is called the *Wing-Pea*, which when it is very young is dressed and eaten like the *Kidney-Bean*. The Blossoms are of a beautiful Colour, and make a goodly Shew in a Garden; for they grow in any Soil without difficulty, if they be sown in *April*.



## C H A P. VI.

*Of such Herbs and Plants as are commonly used in Sallads, with the best Methods of Cultivating and Mixing them.*

**B**ESIDES the great Variety of Legums and esculent Plants, which we have already named, the greatest Part whereof may be eaten by themselves; there are likewise many excellent Herbs and useful Plants exceedingly grateful to the Palates of such as can relish the Beauty and wholesome Diet of *Sallads* mixt with Discretion and Art.

Mr. *Evelyn* hath wrote a small Tract called *Acetaria*; wherein he hath with a great deal of Learning and Skill described the several Virtues of Sallad-Herbs, their Usefulness and Salubrity to Mankind, when rightly chosen, ordered, and dressed; I shall therefore without any difficulty take from thence what is to my present Purpose, and what hath been found by Experience to be right and true; desiring the Reader to have a little Patience, whilst upon this Occasion I say something of the great Blessing of Health and long Life, that would attend Mankind, if the Use of Sallads were made more our ordinary and familiar Food; and not brought to the Table only for Shew, or by Way of Introduction to the Luxury of various Meats and Flesh, studiously heightened to the Taste by artificial and unwholesome Sauces, to the Ruin of Mens Constitutions, and the fastening upon them all sorts of scorbutick and lingering Diseases: For these are known to debauch the Stomach, and sharpen it to devour Things of difficult Concoction with those of more easy Digestion, and of contrary Substances, more than it can well dispose of. For the Observation of the Naturalist (*Plin. Nat. Hist.*) is most certainly true, *Hominis Cibus utilissimus Simplex*; which is also confirmed by what we find as to other Animals, which are so seldom afflicted with Mens Distempers derived from the Causes above mentioned. For the Stomach easily concocts plain simple Food, but finds it hard to overcome Meats of different Substances; whence we so often observe temperate Persons of a regular Diet very healthy; such as the laborious Husbandman, who is ordinarily more robust and longer lived than others of an uncertain extravagant Diet. So true was *Osellus's* Memorandum in the Poet, *Hor. Stat. l. ii.*

————— *variae Res*  
*Ut noceant homini, credas, memor illius Escæ*  
*Que simplex olim tibi federit.* ———

To the Purpose of what we are now speaking, it may be observed, that our bountiful and loving God, when he particularly ordained Herbs and Fruit for the Food of Men, (*Gen. ix.*) speaks not one word concerning Flesh for about one Thousand six Hundred Years till after the Flood. And when the Mosaick Law afterwards made Distinctions and Prohibitions about the *legal* Impurity or Uncleaness of Animals, it is very observable also that *Plants, Fruits, and Herbs*, of what Kind soever, were left free and indifferent for every one to chuse what he liked best. As if it was thought unbecoming the Dignity of Man's Nature, before Sin entered or grew enormously prevalent, that any Creature should be put to Death to sustain that Life, which might have been upheld by the most delicious Herbs and Fruit, even in Paradise itself.

Many of the Fathers (*Tertullian, Jerom, &c.*) themselves were tempted to think, that the Permission of eating Flesh to *Noah* and his Sons, was granted them no otherwise than *Repudiation* of Wives was to the *Jews*, viz. *for the Hardness of their Hearts*, and to satisfy a murmuring Generation. But what saith *Seneca*, (*Epist. 108.*) This should seem no hard Task to refrain from eating Flesh, if Men abhor'd (as they ought) Cruelty and Intemperance: For Herbs and Sallads are physical and natural Advancers of Health and other Blessings: And therefore Abstinence from Flesh deprives Men of nothing but what Lyons, Vultures, Beasts, and Birds of Prey satiate and gorge themselves withal. That whole Epistle of *Seneca's* is very fine and elegant; shewing how many slavish, hurtful, and impertinent Customs he had freed himself from with Pleasure and Satisfaction to his own Mind. Let this be apply'd not only to *Sarkofagists*; but also to the excessive Drinkers of foreign Spirits and hot Liquors!



In what I have here advanced, I am far from thinking Conscience any otherwise concerned than to preserve Moderation and Temperance. There is no such thing under the Gospel as the Distinction of Meats, *pure* and *impure*, though Reason should teach us to have some Regard to the cruel Butcheries of many harmless Creatures too often put to rack and merciless Torment to gratify the wanton and vitiated Palates of extravagant Epicures. What I would be understood to mean, and to lay some Stress upon, being led by Reason and the Authority of wise and good Men, is, that if Persons would study to live long and happily, they should live *less* on Flesh, and *more* on wholesome Vegetables. I say nothing *here* of *Blood*.

There are indeed two Objections that lie against this Doctrine here advanced : *First*, That there are few Constitutions could be either long or happily supported by so crude and lean a Diet. To which it may be sufficient to answer, that that Objection chiefly bears upon too sudden and indiscreet a change of Diet, or too unskilful a Mixture and Preparation of Herbs and Sallads ; (of which last more anon.) Indeed, when Persons from their Infancy are inured to Grass-Diet, and trained up to feed on the Flesh of Beasts, Birds, or Fishes, it may be difficult, if not dangerous, to make a sudden change in the middle or the latter end of Life, to live *wholly* on Vegetables : But I doubt not in the least, but that in any Part of Life a discreet Change and Choice would remove the Objection and establish the Doctrine of *Longævity*, from the more frequent Use of Herbs, Fruits, and Plants. *Secondly*, It is also objected again, That all or most of Vegetables (as well as many other Things) have since the Flood, and as the World grew older, grown more crude, more impaired, and dejected of those nourishing Virtues, wherewith they were at first endued ; and which, according to the Opinion of many, was the cause of the *Longævity* of the *Antediluvian* Patriarchs. To which I answer, That I have nothing to say against the Doctrine of *Longævity* from the Use of Herbs, Plants and Fruit ; but that *these* have lost any of their original Virtues, much less that from being the most wholesome Diet, are now become noxious or dangerous, this is *begging the Question*. On the contrary, it is more than probable from the present Constitution of Nature, the Order of Things, both without and within us, the Laws of God to encourage Temperance, and his severe Threatnings to punish Excess and Intemperance, that there is not the least Decay in Nature, where equal Industry and equal Skill is apply'd. The most learned Dr. *Sherlock*, in his ingenious and polite Sermons bids fair to have made it probable, that the Flood better'd, and not spoil'd the Earth, to have repealed and not executed the Curse on *Adam*.

Our learned and excellent Botanist, Mr. *Ray*, is transported in describing the Virtues and Excellencies of Vegetables for Man's Use. *Plantarum usus latissime patet*, &c. " The Use of Herbs and Plants (saith he) is in every Part of Life of such Importance, that we cannot be said without them to subsist either plentifully or handsomely, or indeed to live at all as we ought to live. Whatsoever Food is necessary for Life, whatsoever contributes to our Delight, is brought out of that plentiful Store. And then how much more innocent, elegant and healthful is a Table covered with these, than with the Butchery and Slaughter of Animals ? Doubtless, Man by his Nature is not a *carnivorous* Creature, nor is he furnished with Weapons for Rapine and Prey, with pointed Teeth and crooked Claws ; but with *Hands* to gather Fruits, and *Teeth* to chew them. Neither do we read that Flesh for Food was permitted him at all before the Flood, &c.

Indeed, the surprising Goodness of the wise Author of Nature is discovered in the various Natures and different Properties of Plants ; on purpose to exercise the Skill of Man in *mixing*, and his Delight in *tasting* the Elegancies of Garden Products. A gentle *Heat* in some to warm and cherish ; *Coolness* in others to temper and refresh ; an oily *Juice* to nourish and feed the Body ; poyant *Acids* to quicken the Appetite, and all to court the Obedience of the Palate ; to renew and support our natural Strength ; to delight and recreate us with their harmless Flavour and Perfumes. In short, the infinite Variety and Plenty, with which God hath stored this Globe (more with Plants and Vegetables than with any other Provision whatsoever) seems kindly and loudly to invite all her living Inhabitants, not of *fiavage* but of *gentle* Nature, to come and partake of her delicate and hospitable Fare. Accordingly we read of some of the greatest Princes that took the Spade and the Plough-staff in the same Hand they held the Sceptre, and the noblest \* Families thought it no Dishonour to derive their Names from Plants and Sallad Herbs. However, to shew how the best and most innocent Things may be perverted, they changed those frugal harmless Feasts of their Ancestors into Prodigality and Waste ; insomuch that we read of Edicts and Laws

\* Valeriana, Lactucini, Achilleia, Tyssimachia, Fabius, Cicero, Lentulus, Piso, &c. à Fabis, Cicere, Lente, Pisis bene ferendis dicti. *Plin. Nat. Hist.*



enacted to restrain even the Pride and Luxury of Sallads; (*Cic. Ep. Lib. 7.*) and all that was but *green* was so much engrossed, that *Pliny* tells us (*Plin. Nat. Hist. Lib. 19.*) (merely I suppose) a poor Man could hardly find a *Thistle* to dress for his Supper, or nothing but what his hungry Afs would not touch for fear of pricking his Lips.

But by Way of Caution I again add, I would not be understood, as if because Sallads are innocent and wholesome Food, that therefore Men should be turned to *Grass* again, and be advised to neglect the Bounty of Heaven, as well as forget their own Health and Comfort; I would only be thought a little (by former Practices and Examples) to reproach the Effeminacy and Luxury of the present Age; and at the same Time paint the Beauty and the Blessing of Temperance, and the vertuous Consequences thereof, shewing at the same Time that Nature is satisfied with a little; and that if Appetite *a bene moratus venter* be kept within the Bounds of a moderate and inartificial Diet, the Remains of Fortune may be with Pleasure reserved to the nobler Parts of Life.

Having thus far in general prepared my Way by shewing the usefulness of Sallad Herbs and their Salubrity to Mankind, I shall proceed to describe their particular Natures and Use, with the aptest Methods of raising and cultivating them. In order to which I shall begin with

*Lettuce.*] The *Lettuce*, of which there are great Varieties; and those are generally most esteemed which *head* like a Cabbage, hard and round. There are many of late Years have affected to introduce several new Kinds: But there are only three or four sorts, that any one need desire to cultivate, *viz.* the *Imperial*, the *Silesia*, the *Roman*, and the *Dutch brown* Lettuce. The *Imperial* and *Silesia* Lettuce, if they be sown in *August*, and in *October*, transplanted under some warm Shelter, will be very large, and fit to cut early in the Spring, for they endure the Winter pretty well; or if they be sown in the Spring, they will be fit to cut by Midsummer. The *Dutch brown* Lettuce is by many admired for its early cabbaging in the Spring; for it will also stand the Winter; but the *Roman* Lettuce, though a very good one, expects to be more tenderly treated, and to have the advantage of the Summer; for it is impatient of the Frosts. *Lettuce* being the most precious Ingredient in a Sallad, or rather by some thought a Sallad by itself, the Admirers of it (eaten either before or after it cabbages) continue a Succession, by sowing it all the Summer Months.

Such of the several sorts as produce the largest Heads in the Spring, should be suffered to run for *Seed*; and for that purpose should be *stak'd* lest the Winds throw them down, or too much weaken them at the Roots. The Seeds are fit to gather as soon as they begin to shew their *Down*, when the whole Plant should be set under Cover to dry, till you find the Seed is fit to be thrashed out.

*N. B.* The best Seed and Kinds will degenerate in two or three Years if they are continued to be planted in the same Garden; and therefore the best Way once in two Years, is to make a Change with some of your Neighbours that have a different Soil.

*Lettuce* is supposed to have a *Somniferous* Quality eaten by itself in any Quantity. And *Hypocrates* acknowledges that those of his Country were there poisonous, though with us, who have less Sun, the Efficacy of its Juice is laver'd and weakened into Wholesomeness and made agreeable. It ever was and still continues the Principal of the whole Tribe of Sallads, having, besides its other Properties, a cool and refreshing Nature. It was in such high Esteem among the Antients that divers of the *Valerian* Family (as before was hinted) thought fit to dignify and distinguish their Names with that of *Lactucini*.

Mr. *Evelyn* saith, that though it is of a Nature colder and moister than some other Herbs; yet it is less astringent, and so harmless, that it may be safely eaten raw in Fevers; for it allays Heats, extinguishes Thirst, excites Appetite, kindly nourishes; and above all, represses Vapours, and promotes Sleep. Accordingly, the excellent Emperor *Tacitus*, so famous for his Frugalities, was yet wont to say of *Lettuce*, when he eat it, that he did *Somnum se mercari*. In short, we meet with nothing amongst all the crude Materials for Sallading, either so proper to mix with others, or so wholesome to be eaten alone; always supposing to be added the usual *Oxolenum* of Vinegar, Oil, and Pepper.

*Endive.*] *Endive*, when it is blanched, is much used in Winter Sallads, and the *curled* sort is at present most in Vogue; but the largest, whitest, and tenderest Leaves are thought best when they are boiled. But I am of Mr. *Bradley's* Mind, that it is hardly worth while to plant it, having little Taste or Flavour. But as it has its Admirers, they are advised to sow the Seeds the latter end of *April* in a light rich Soil, and about *July* plant it deep in Rows about six Inches asunder; and as it grows, tie up some Plants one after another, to whiten for Use.

*Purslain.*] *Purslain* is another insipid Herb; but being very *cooling*, is much admired by some, and generally entertained in all Sallads mingled with hotter Herbs; though some learned



learned Physicians have accused it of being apt to corrupt in the Stomach, and of being hurtful to the Teeth. There are two sorts of it, the *green* and the *golden*; the *last* is most tender. They are both raised from a small black Seed sown in some warm Place in *April*, and will be made better and earlier by the Help of Glasses.

*Sellery.*] *Sellery*, when it is well blanched, and set in a Place and Soil proper for it, is one of the most generally approved Winter Sallads, it being of a hot Nature, and most prevailing rich Flavour. It is a generous sort of *Macedonian Parsley*, and hath not been long from *Italy* introduced amongst us: But now it most deservedly obtains a Place not only in raw Sallads, but also in Soups and Pottages: For its high and grateful Taste, it always makes an useful and an acceptable Appearance; and never is more graceful, than when it erects itself in the middle of the *grand Sallad* at *Prætor's* Feasts, and great Mens Tables. The Seed is to be sown in *March*, and (to have it early) in a Hot-Bed too. About six Weeks after, the Plants are to be removed in Beds of rich Earth, four Inches asunder; where they are to be well watered to make them tender and white, after they are well *blanched*, for therein consists their Goodness. But for the better purpose of *blanching* them, it is to be remembered, that they are to be set in *Trenches*, that the Earth may readier close upon them, and keep them moist; and moreover that each Plant be tied with Bands before they are earth'd up. *Sellery*, thus order'd and earth'd up to the top of its Leaves, whitens in three Weeks or a Month. But when it is once whitened it rots as it stands; and for that reason it is not to be earth'd or cover'd with Dung, but in such Proportion as suits the present Occasion. The severe Frosts spoil the *Sellery*, and therefore care should be had to cover or skreen them. It may be necessary to give a Caution of a small red Worm, which often lurks in the Stalks, that it may be removed.

*Fennel.*] *Fennel*, but especially the *Italian* sort, is a very necessary Plant in a Garden; and if it be managed as *Sellery*, is an useful and very much admired Article in a Sallad. The common sort may be made pretty good with blanching, but not comparable to the *Italian*, which hath been but of late Years introduced amongst us. It should not be sown till the latter end of *April*, or the beginning of *May*, lest it run to Seed, and the Plant become hard and stubborn; for after it is blanched as *Sellery*, the youngest and tenderest Shoots of it are the best; which will eat sweet and delicate, having the usual Sauce of Oil, Salt, and Vinegar: For it is aromattick, hot, and dry; wherefore it expels Wind, and recreates the Brain. The *Italians* eat the blanch'd Stalk peel'd when young, which they call *Cartucci*, all Winter long, being an hardy Plant, and not easily spoil'd with the Frost. There is a small *green* Worm which sometimes lodges in the Stem of this Plant, as the *red one* doth in *Sellery*.

I have been informed, that the Honourable Sir *Spencer Compton*, present Speaker of the House of Commons, as well as my Lord *Burlington*, have at *Chiswick* arrived to great Perfection in the Cultivation of this Plant, which is called by the *Italians* the *Fenocuo*; for by dextrous Removes into very rich Soils, they can in one Summer swell the Plant to be larger than one's Arm, and mellow its Taste into a spicy Sweetness, surpassing even the Flavour of *Sellery*, and have vast Quantities succeeding each other through the whole Year. My Friend, Mr. *Parker*, tells me they sow it in a Drill three Inches deep, as thin as possible; and when the Plants are reasonably strong, they single them to a Foot distance, disposing those which are removed in the same Order in the richest Earth that can be made. In dry Weather they draw as much Earth to the Plants, as Necessity and Occasion require, in the Method you do *Sellery*; observing that the *larger* and *whiter* it is, the better and higher tasted: But it is to be remembered also, that those Plants which are blanched in the Place where they were sown, without a Remove, are always better and bigger than those which are transplanted, which is a Reason for its being sown thin.

*Sorrel.*] *Sorrel*, of which there are divers Kinds; but that called the *French Sorrel* with a round Leaf now generally prevails. It is by Nature cold, absterfive, and acid; and therefore sharpens the Appetite, allwages Heat, and strengthens the Heart. It is a great *Antiscorbutick*, and being mixt with some of the foregoing, imparts a grateful Acidity and Quickness to the rest; such as supplies the want of Orange and Lemon; and for that reason should never be excluded from the Sallad. It will grow almost in any Soil, and the round sort is best, multiplied by running Branches, which will easily take root in the Earth, and so being removed in *May*, will grow in Tufts.

*Spinage.*] There are but two sorts of *Spinage*, properly so called; the Seed of one is round, the other prickly; but as to the Plant there is little or no difference, with respect to Shape or Taste, eaten either boiled or raw. If it is eaten as a Sallad with other Herbs, it must be gathered whilst it is very young, and then, though it is something *insipid*, yet it is tender. But doubtless the best Way of eating *Spinage* is to boil it with no other Water



ter but its own Moisture; and then it becomes better relished, and an admirable Sauce for all sorts of boiled Flesh. 'Tis *laxative* and *emollient*, therefore good for the aged; and so inoffensive, that a sick Man may eat it. The Plant by Original is a *Spaniard*; but it is now well naturalized, and may be raised in almost all Parts of the Year. It loves a rich Soil and deserves it; for if it is sown in the beginning of *August* in a Place sheltered and well exposed to the Sun, it will be fit for Use almost all the Winter. And then what is sown in the Spring, *February, March, April, and May*, will answer, by a constant Succession, the Uses of the Kitchen.

*Cherville.*] The *Musk*, or *Spanish Aromatick Cherville* is a mighty useful Plant in Sallads, where the tender Tops are never to be wanting, as long as they may be had; being exceedingly wholesome and chearing the Spirits. Physicians commend boiling their Roots, and their being eaten cold, for aged Persons. It is multiplied only by Seed, which is longish and black. There is an ordinary sort which is an Annual, and should be sown monthly for the sake of their tender Leaves; but the sweet *Cherville* will remain many Years without being spoiled by the Frost.

*Cresses.*] The *Garden Cresses* should be sown monthly; because they last good and tender but a little while, and being sown very thick, a sufficient Quantity with a Knife is soon gathered, even when it is not more than half an Inch above Ground; but when it is desired for early Sallads, recourse must be had to the hot Bed, where you may have it almost all the Year. It bears Seed plentifully, and of a Colour different from most others, being *red*. But the *Indian Cress*, *Nasturtium Indicum*, is what is now most coveted in Sallads; for not only their Leaves, but Capuchin-Capers and Flowers are very agreeably mixt with colder Plants. This is called by some the *yellow Larkspur* from the Colour and Shape of its Flower. If they are sown in *April* they will grow very well in ordinary Garden-Mould, and will increase wonderfully both in Stalk and Flower. The Seeds of this Plant may be made use of for Mustard; for being well dried and beaten to a fine Powder, and afterwards mixt with Onion and Vinegar, it yields a quick Pungency, and answers the Purposes of good Mustard. The Leaves, Flowers, and Seeds of this Plant are moderately hot and aromatick, do greatly revive the Spirits, and add a very agreeable Flavour mixt with other Herbs; but above all, are of singular Effect against the Scurvy. There is also the *Nasturtium Hybernicum* commended much by some; and every one knows the Use and Excellence of the common *Water-Cress*, which is wont to grow at the Head of Springs. They are all of the same Nature, though of different Degrees; are best for raw and cold Stomachs, though they are supposed to afford but little Nourishment.

*Garlick.*] *Garlick*, which by reason of its strong smell and rankness, is often banished the Sallad, is yet both by *Spaniards* and *Italians*, and the more Southern People, familiarly eaten almost with every thing, and esteemed of such singular Virtue to help Concoction, that 'tis thought a Charm against all Poison and Infection; called from thence the Countryman's *Theriacle*. It may be proper enough for such Rusticks as live in Marshes and Fens; but to be sure 'tis not for nice Palates, further than to permit a gentle Rub on the Plate with one of the Cloves; which yet most think better supply'd by the milder *Rocombole*. If it is boiled, as they sometimes eat it in *Spain*, its Rancour is tamed, and it becomes *nourishing* rather than *medicinal*. But,

*Onion, Leek, &c.*] The *Onion, Leek*, and *Cives*, are without much Difficulty admitted into the Sallad, being not near so hot and rank as *Garlick*; especially the Tops eaten young and tender. In *Italy* they frequently make a Sallad of *these* only, seasoned with Oil and Pepper: And a laborious Countryman, with *Bread* and *Salt*, and a little *Parsley*, will make a contented Meal with a roasted *Onion*. The *Onion* is indeed best eaten boiled in two or three Waters, giving *then* a kind and mild Relish, raising Appetite and strengthening the Stomach; but they are supposed to offend the Eyes and Head, if they are eaten in Excess. How this useful Bulb was deified in *Egypt* we are told in \* *Juvenal*; and *Herodotus* talks of vast Sums of Money spent in this Root, distributed among the Workmen whilst they were building the Pyramids. And surely it must be a longing Degree of Love for this Plant, that the *Israelites* should grow uneasy under a Theocracy and View of a promised Land flowing with Milk and Honey, wishing to return to Bondage and Slavery, only led with Hopes of enjoying again their beloved *Leeks* and *Onions*, and *Garlick* of *Egypt*.

*Capficum Indicum.*] *Capficum Indicum*, or *Indian Pepper*, is superlatively hot and burning; and yet by the *Africans* is eaten with Salt and Vinegar by itself. But although such Experiments may be dangerous here; yet its terribly-biting Quality may by Art and Mixture

\* O Sanctas gentes, quibus hæc nascuntur in hortis  
Numina! ——— Juv. Sat. 15.



be rendered not only *safe*, but very *agreeable* in Sallads. Mr. *Evelyn* advises to take the scarlet Pods, and dry them well in a Pan, and when they are become sufficiently hard, cut them into small Pieces, and stamp them in a Mortar to Dust. To each Ounce whereof put a Pound of Wheat-Flower, fermented with a little Leaven. Knead, or make them into Cakes or Loaves cut longwise in the shape of *Naples* Biskets: These *rebake* a second Time, till they are Stone-hard; pound them again as before, and scarce it through a fine Sieve. Thus prepared, it becomes a proper Seasoning instead of vulgar Pepper.

*Sage.*] *Sage* is of a hot and dry Nature, excellent for the Head, Memory, and Eyes, and in all paraletical Cases. There are three or four sorts; the *red*, the *green*, and *Tea-Sage*; and another of a *Wormwood* Flavour. They are all raised of Slips taken from the Root the latter end of *April*, or the beginning of *May*. 'Tis a Plant endued with so many wholesome Properties, that the constant use of it is said to render Men almost immortal. We cannot therefore but allow the tender *Summities* of the young Leaves in *May* and *June*, and afterwards the *Flowers*, a Place in the cold Sallad, sparingly used.

*Tarragon.*] *Tarragon* is of *Spanish* Extraction, hot and spicy; therefore the Tops and young Shoots are always to find a Place in our Sallads, especially where there is much *Lettuce*. It loves a warm Exposition, and is increased by Slips taken from the Root, and planted in *April*. It endures the driest Summer and the hardest Winter.

*Mint.*] The Nature of *Mint* is dry, warm, and very fragrant; being a little pressed, is friendly to a weak Stomach, and powerful against all nervous Crudities. The tender Tops of it enter very agreeably into our Sallads, and are of great Use in Soops and some Sauces: And every one knows the Water drawn from it in a *Still* is excellent to expel Wind. It is easily propagated by parting the Roots in the Spring; should be removed once in three Years, and will grow almost any where.

*Baulm.*] *Baulm* is much of the same Nature and Use, and is cultivated from the Roots.

*Borrage.*] *Borrage* hath a pleasant Flavour, is agreeably hot, and a Purifier of the Blood. The tender Leaves, but especially the Flowers, may be eaten in Composition. Above all, the Sprigs mixt with Wine, Water and Lemon, are of known Virtue in Summer to cheer the Spirits, and to relieve the hard Student.

*Bugloss.*] *Bugloss* is much of the same Nature, but something more *astringent*. They are *both* encreased only from the Seed, which presently falls as soon as it begins to be ripe, and therefore must be narrowly watched.

*Cornfallad.*] *Cornfallad* is of a Nature loosening and refreshing, and is one of the best Winter-Sallads; its Tops and Leaves being tender and very agreeable. The *French* call it *Salade de Preter*, because it is usually eaten by itself in *Lent*. It usually sows itself; for some have observed that the Seed will not last good above six Hours, if kept from the Ground.

*Mallow.*] I cannot omit mentioning the *Mallow* amongst the Sallad-Race, because, tho' it is at present discarded, it was in high esteem amongst the Antients. *Pythagoras* held *Malvæ folium Sanctissimum*. The *Garden Sort* is much approved by *Dioscorides* and *Galen*; but *both* were held by the *Romans* in *diliciis*. *Malvæ salubres Corpori*, (saith *Horace*, *Epod. II.*) It bears beautiful and fair Flowers the second Year after sowing; but as this Plant flowers late in the Year, the first Seeds are to be gathered with Care.

*Dandelion.*] *Dandelion*, or *Dens Leonis*, though it be an Herb which may be found in almost every plough'd Field, yet when it is blanch'd as *Sellery*, is esteemed by many an excellent Sallad mixt with other Herbs. Some macerate it in several Waters to extract the Bitterness. It is somewhat opening, a great Antiscorbutick, and therefore very wholesome.

*Elder.*] The Flowers of *Elder*, infused in Vinegar, are grateful both to the Stomach and Taste; and though the Leaves be somewhat rank, and so not admitted into the Sallad; yet the whole Shrub is of most sovereign Virtue. The Spring-Buds and tender Leaves, by those who value and would preserve their Health, are used in Pottage as a wholesome Breakfast.

*Parsley.*] Some few Tops of young and tender *Parsley* are sometimes admitted into a raw Sallad. There are two sorts of it, the *common* and the *curled*. It is of a pretty hot and dry Nature; yet not hurtful to the Eyes, as is commonly thought, but opens Obstructions, and is very diuretick. This Plant is otherwise useful in the Kitchen, for Stuffings and Sauces.

*Burnet.*] *Burnet* is another useful Plant, and much valued by the *French* and *Italians*, even in their Sallads, for its cheering and exhilarating Quality; believing that if *Pimpernel* (their Name for *Burnet*) be wanting, there cannot be a good Sallad. Every one knows a Sprig of it in *Wine* gives an agreeable Flavour acceptable to most.



*Sampier.*] *Sampier*, growing on the Sea-Rocks, hath many valuable Properties; for it is not only one of the best Pickles; but when young and tender, is an incomparable Ingredient in a Sallad. For its aromattick Virtue and operative Force against Vapours, as well as that it sharpens the Appetite, is preferable to most of our hotter Herbs, and Sallad Ingredients. Mr. *Evelyn* wonders that it is not propagated in Kitchen-Gardens, where it might be had all the Year round, as it is in *France*; from whence he saith he received the Seeds, and it prospered better than what he had from our own Coasts. It did not indeed prickle so well as what grew on the Rocks; but in all other respects for composing Sallads, it had nothing like it.

*Scurvy-grass.*] *Scurvy-grass*, but especially that of the Sea, is a great *Antiscorbutick*, is also sharp, biting and hot. It is generally put into Ale, and used as a Diet-drink; it is of the Nature of the *Nasturtium*, and prevalent against the Scurvy. However, a few of the tender Leaves may be admitted into our cold Sallads.

*Small Herbs.*] Besides all these, there are what the Gardeners are wont to call *small Herbs*; such as should always be cut whilst they are in the Seed-Leaf, viz. *Mustard*, *Radish*, *Turnep*, *Rape*, *Spinage*, and *Lettuce*. These are all reckoned a great Delicacy, especially when they appear early in the Turn of the Year, when every Thing green strikes the Eye, and is tasted with Eagerness and Pleasure. Wherefore to satisfy a longing Curiosity, these *small Herbs* are raised under Glasses and Frames; that by their Help they may be defended from Frosts, and be made to present themselves at the Table all the first and early Months. They are commonly pulled up by the Roots out of the Hot-Bed, not only to make Way for others of a different Nature, but also to gain as great a Length of the *Stalk* as possible, which, while it is so young, is as good and tender as the Leaves themselves.

There might be several other sorts of Herbs and Plants reckoned up as fit for Sallads, which though neglected here, and perhaps despised, yet find Entertainment still in Foreign Countries. Mr. *Evelyn* tells us, that the large *Heliotrope*, or *Sun-Flower*, before it comes to explain itself, when dressed as the *Artichoke*, is eaten for a Dainty. Even the pale whiter *Popy* is eaten by the *Genoese*, and the Tops of *Wormwood* with Oil alone, by the *Spaniards*: *Galen* tells us he was wont to eat green *Rue* by itself with only Salt and Oil, as not only exceedingly grateful, but wholesome, and of great Virtue against Infection. Nay, *Pliny* reports it to be of such Effect for the Preservation of Sight, that the Painters of his Time used to devour a great Quantity of it. Neither should it be thought strange that the common *Burdock* comes now and then to the best Tables in *April*; before any Pears appear. For being stripp'd, and the Bitterness soaked out, and being treated and blanch'd as the *Chardoon*, is eaten in *Poiverade*, and reckoned a Delicacy.

*Silphium.*] But I shall chuse to conclude the whole of what has been spoken on this Head with a large and particular Account of the *Silphium* of the Antients; which, if we could procure right and genuine, by the Account we have of its rare Virtues, might readily gain the Precedency of every Thing that has gone before, and used even as a choice Ingredient in our Sallads and Sauces.

*Σίλφιον*, so called by the *Greeks*; and by the *Latins*, *Silphium*, *Lasar*, and *Laserpitium*, and by the *English*, *Asa*, or *Asa foetida*, is an extracted Juice from the Roots of a *Persian* Plant like a Carrot, growing wild in the Mountains, and by the Heat of the Sun and Time, reduced to the Consistency of a gummy Substance, and so brought over to us out of *Persia*, and chiefly from *Gamroon* by our *East-India* Merchants. Its Smell (as will appear more hereafter) is very offensive; especially at, or soon after its first gathering, and to those who are not used to it: But when it comes to be mellowed by Age, and used discreetly in small and due Quantities, learned Palates have only judg'd it to have an high resinous Smell and Taste, and to afford a grateful Flavour, agreeable to what *Theophrastus* saith of the Plant and Country, that it doth afford ὅπου πολὺν καὶ ἑυοσμὸν, \* abundance of Juice, and that well perfumed.

It is true, † *Aristophanes* in one or two Places, mentions it as a thing *inamœni odoris*, but that must be either that he had seen none in his Time, but what was extracted from the Stalk or Leaves, the worst and most corrupt sort; or else, that as a Comedian he speaks of its unfavoury Effects, and gives it the same Character that he would have done *Garlick* or *Rocombole*.

I was always of Opinion that our *Asa*, when we have it genuine, is the same with the ancient *Silphium*, so much cry'd up for its rare Virtues and excellent Qualities by the Antients: But because I had a Mind to support my private Opinion by a better Authority

\* *Theophr. Hist. Plant.* l. 4. chap. 3.

† *Aristoph. Equit.* p. 239, 240.



than my own, I wrote the following Letter to Dr. Bentley, desiring he would please to give me his Sentiments of this Matter, which he was pleased to do (as the Reader will see) in a very obliging manner.

Reverend SIR,

I Have made bold to order my Son to wait upon you with this; because, though I am a Stranger to you, your Character makes you an Encourager of Learning in all its Parts. I have already published something about Gardening, which the World has kindly received, and being now about to publish a new System of Vegetables, I am at a Loss to come at any Certainty about the famous *Silphium* of the Antients; that is to say, whether we have or know any thing of it at this Day, and in what Part of the World it grows. Mr. Evelyn has conjectured that our *Asa foetida* (when we have it not adulterated) is the true *Silphium*: And I am much inclined to be of his Mind; because all our Books writing about Drugs, agree that it is the Juice of the *Lasfer*-Plant, the old Latin Name of *Silphium*, and the aforesaid Author thinks that the odoriferous *Benzoin* is nothing else but the Extract of the Leaves and Stalks of the *Lasferpitium*. What I now desire to know of you, Sir, is, whether in your great Reading and comprehensive Learning you have met with any thing, either to confirm or to contradict this Notion.

I need not say to you how full *Pliny* is in his Description and Commendation of this noble Plant, recommending it both for the Table, and medicinally used; giving also Rules by which the genuine might be known from the adulterated. *Aristophanes* more than once mentions it, and speaks of the *Βάτλη σίλπιον* as a thing of the highest Value; nay, even his comical Description of the Effects thereof in his *Ἰπποκρίτης* may serve to shew us something of its Nature and Use. *Athenæus* also speaks of it as one of the greatest Delicacies in *Condiments*; and all the old Physicians mention it with Respect; viz. *Dioscorides*, *Hippocrates* and *Galen*. From this last it is recommended by *Sanctorius* under the Name of *Succus Cyrenacicus*, which *Quinsley* his Commentator (ignorant of the Plant) could not understand. You know *Herodotus* mentions a sort of Weazel, that is supposed to breed and lie under this Plant; accordingly, we have the Figure of it in a Medal of *Battus* at this Day. I should be glad to know your Sentiments, and whether it will help us to discover its Nature and Properties.

I have not yet been able to learn from whence our *Asa* comes; but as it is, it gives a noble Flavour discreetly used in Sauces. I should not think it impossible, if the true *Silphium* Plant could be found, but we might bring it over with Care, and naturalize it with us, as we do most other the tenderest Exotics, and then we might be sure to have genuine what the Antients so highly extol. For I confess my Zeal in this Matter carries me to think no Pains or Care can be too much to compass what was always accounted superlatively excellent to a Proverb. You will be so good as to pardon this Freedom, and to believe that whatsoever you shall think fit to communicate to me about this Matter, shall be made use of with all Honour and Fidelity, by,

S I R,

Your most obedient humble Servant,

J. LAURENCE.

To Dr. Bentley,  
Nov. 1724.

To which the learned Doctor was pleased in a little Time to send me the following kind and obliging Answer.

Reverend SIR,

THAT the modern *Asa* corrupted from *Lasfer*, *λασδερ*, is the antient *Silphium* I have been long convinced; but our Merchants import commonly the worst rotten Stuff, which has deservedly given it the Epithet of *Foetida*. I once met with a Quantity so good, that I convinced Dr. Mead and other Physicians, that it was genuine *Silphium*: Besides all other Marks to which it answered, I appeal'd to that decisive one in *Pliny*. *Probatio sinceri prima in Colore modice rufo* (*Dioscorides* *καρπούρο*) *Et cum frangitur candido intus*. I carried a Piece to Dr. Mead's, &c. and shew'd them first, that the Outside was Pink-colour, *καρπούρο*, then with a Knife I cut a thin Slice off and it was white, and that new white Surface in two hours Time turned Pink again; and so it

would



“ would do *toties quoties*. This convinced every one; for what other Drug will turn Colour so upon breaking or cutting?

“ The *African Silphium* was lost before *Pliny's* Time, and he relates the Cause of it. What was in Use in his Time came all from *Parthia* or *Media*, and was the very same with that of *Africk*, and sometimes (as *Strabo* saith) was better than that. The Reason of it is, that it was a *Manufacture*, the Juice being mixt with fine Meal, to give it a Consistence and to keep it from sticking like Tar, or corrupting. So no wonder the *Cyrenean* generally excelled; because they had better Markets to vend it in, which encouraged them to be cleanly about it.

“ It doth not appear that the Creature you call a Weazel fed upon the Plant of *Silphium*: *Herodotus's* Words *καλῶ ἐν τῷ Σιλφίῳ γινόμενα* do not warrant that. *Herodotus* (if you compare Chap. 192. with Chap. 169.) calls *Σίλφιον* not the Plant, but the Country where *Silphium* grew; which, according to *Theophrastus* and *Pliny*, was four Thousand *Stadia*, i. e. five Hundred Miles square. In that Country therefore this Weazel was frequently; not that she eat the Plant. Rather than suffer that, the *Cyreneans* would have used them as the *Britains* formerly did Wolves. Besides; one of these Weazels was brought alive from *Africk* to *London* within this five Years; and yet no Account informs us, that ever *Silphium* grew in *Africk* since the Time of *Pliny*.

“ All the *Afa* now used in *Europe* is brought by the *East-India* Companies, and they have it in the *Indies* from *Persia*. It now grows where it always did, in the barren desolate Mountains of *Persia*, called by the Writers of *Alexander's* Expedition, *Caucasus* or *Paropamisus*. This you will see in *Strabo* and *Arrian*. If you can get a Book published about ten Years ago by one *Kempfer* a *German*, that practised Physick in all the Orient for several Years, you will see a particular Chapter about *Afa*. He went from *Isfahan* on purpose to see the Country Peasants fetch their Harvest of *Silphium* out of those Mountains. He gives you a Picture of the whole Plant, Root, Stalk and Leaves; and it agrees with the Greek Account of the *Cyrenean Silphium*; except such small Differences as may be allowed between a Man that saw it himself, and *Theophrastus* and *Dioscorides*, &c. who never had seen it. The Root is like in Bulk to a large Carrot-Root: They cut the Top of it with a Knife, hollowing it toward the Center; the next Morning the *ῥόδς*, *Silphium* is ouzed out like a Cream; this is scrap'd off and put into a Pot; then they cut the Root again the Thickness of a Crown lower, and the next Morning fresh Cream is produced. This is repeated three or four Times, and so the Root is left and perishes.

“ Now they gather nothing but the Juice the *ῥόδς*: Antiently they used Stalks and Roots, exhausted of the *ῥόδς*, pounded or grafted, as we now do Sugar or Pepper. The *Persians* as well as *Africans* used this, Time out of Mind. You may see in *Polycenes*, lib. 4. that *Alexander*, after he had subdued *Persia*, found in the Registers a List of the daily stated Allowance for Dinner and Supper for the *Persian* King's Palace; amongst which are *ῥὸν σιλφίον δύο μνῶν*, *σιλφίον τάλαντον σαθμόν*, two Pounds of the Juice of *Silphium*, of the dry'd Stalks and Roots, above an Hundred Pound Weight. The poor *Athenians* in *Aristophanes's* Time seem to have had no better than *καυλός*, the Stalk, which was the worst and cheapest.

“ *Benzoin* is not (as supposed) an Extract of *Silphium*, but from a quite different Plant; as you may see in *Jacobus Bendries de Medicinâ Indorum*, who saw both Plants. I have seen several Instances where the *Afa* (when perfectly good to *Pliny's* Proof) has done as great Things in Medicine, as ever the Antients mention: In Sauce it daily grows more into Use among the Quality. I am afraid your Wish of transplanting it hither will have no Effect; for all Accounts, old and new, declare it incapable of removing, or of Culture; yet query in *Hortus Malabaricus*, if the *Dutch* Gardeners have cultivated it. I am with all Respect,

Yours,

R. BENTLEY.

This kind Letter of the Doctor's gave me considerable Light, and put me upon further Enquiries, particularly how to procure *Kempfer's* Book; which at length after some Time and Difficulties I obtained in *London*. And because the whole Chapter about *Afa* is very curious and particular, for the Benefit and Entertainment of every Reader, I will give it here entire render'd into *English*. Which is as followeth.



*The History of the ASA FOETIDA of DISGUUN.*

The *Hingisib* is an umbelliferous Plant, a-kin to *Lovage*, with branched Leaves like *Piony*, a full and large Stalk; an edged, leafy winged Seed, naked and single, like that of *Branc-Ursin* or *Parfnip*; and a Root yielding *Asa Foetida*. Its Root lives for many Years; is large, heavy, naked, black on the Outside, which on a clayey Soil is *smooth*, in a Gravel, *rough*, and as it were *wrinkled*; for the most Part, single like a *Parfnip*, but oftentimes branch'd into two or three at a small Distance from the Top; some of which grow perpendicularly down, others run obliquely and irregularly just as they are bent and twined by what they meet in their Way. The Top of the Root throws itself out of the Ground, and is set round and thick, like the *Peucedon*, with rough Fibres standing up like Bristles of a reddish brown Colour. It hath a fat juicy Rind, that easily comes off as one pulls up the Plant, and on the concave Part of it is smooth and moist. The Substance of the Root is heavy, solid, and white, like a *Turnep*, full of Fat, very white and very foetid Juice, with a horrid ungrateful Smell, of the Garlick Kind, which is called by the *Persians* and *Indians*, *Hing*; and by the *Europeans*, *Asa Foetida*. The Leaves spring out from the Top of the Root in the latter End of Autumn, six or seven in Number, and always more or fewer in Proportion to the Greatness of the Root; all Winter they flourish greatly, and wither away about the Middle of the Spring. The *Leaf* is branched out into several Parts, even about a Cubit long, shaped for the most Part like the *Piony*, and of the Substance, Colour, and Smoothness of *Lovage*: It hath a Smell not so strong as that of the Root, and a rank Taste joined with a Bitterness and aromattick Keeness. It consists of Stalk and Branches. The Stalk is a Span or more long, not so thick as a Man's Finger, with Ridges winding round, like a Screw, stringy and of a Grass Colour, channelled towards the Bottom by Reason of the Leaves inclosing one another, in the upper Parts round. Each Branch hath upon it *five*, more rarely *seven* Wings placed on the opposite Sides, but not directly over against one another, somewhat more than an Hand's Breadth long, running obliquely upwards; the lower one is longer than the others. The Wings are divided of each Side into several Lobes of uncertain Number and unequal Bigness, oblong and somewhat oval; in some Plants very narrow and long, distinct, and at a good distance from one another quite to the Ribs; and thus being few and seperate from each other, every one looks like a Leaf by itself; in others they are broader, shorter, and more grown together, with oval or circular Indentures in them, according as Nature hath been pleased to divert herself in forming them, which she does with such Variety, that the Difference of the Leaves shall make the Plants appear as if they were not of the same Species. The Lobes run obliquely upwards, are narrow at the Bottom, and lie along by the Sides of the Rib of a Sea-green Colour, smooth, juiceless, stiff, and brittle, a little hollow on the lower Side: They have one small String running from the Rib unequally along them, very rarely accompanied with others on each Side of it. The Bigness of the *Lobes* is uncertain; but one may reckon them at a *Medium* about three Inches *long* and one *broad*. Before the Root dies (which generally happens in the latter End of Summer) there rises, with a Number of Leaves round it, a single, strait, round, furrowed, smooth, herbaceous Stalk or Stem, which grows up to the Height of six or nine Foot or more; at the Bottom it is larger than the Grasp of a Man's Hand; it grows less by Degrees, and is divided into a small Number of Branches, and they again subdivide into Umbrellas, like the rest of the ferulaceous Plants. It is surrounded with very small Leaves, which grow alternately about the Distance of a Hand's Breadth from one another; which, with their broad, membranous and swelling Bases, cling about the Stalk unequally and cross-ways to each other; and when they fall off leave Marks behind them, which make a false Appearance of its being divided into Joints. It is exceeding full of a very white fungous Pith, not broken by Joints, but with a few short Fibres amongst it running irregularly length-ways. The Umbrellas are upon a Stem of a Foot, others of a Span long, or yet shorter, and shoot out into several *radii* disposed circularly; each of which making a Kind of smaller Umbrella, ends in a few little *radii* of about two Inches long; and on these grow the Seeds naked and upright upon short and very small Stalks. The Seed is plain and *edged* (or *leafy Fo-liaceum*) of a reddish brown, oval, nor unlike the Seed of *Sphondylium* or the *Garden Parfnip*; but somewhat larger and blacker than the latter, a little hairy and rough, marked with three Furrows, one of which runs through the Middle, and the others wind along the Edges, and all reach from End to End. It hath a small Scent of Garlick and a strong smart bitter Taste. In the Middle of the outward Shell or Husk is contained the true Seed, which is black, flat, and oval, ending in a sharp Point. The *Flowers* I did not see,



but they say they are very small ones, and of a whitish pale Colour, and I do not question but they consist of five *Petula* or Leaves.

§ 2. The Plant of *Afa Foetida*, is called by *Avicenna*, *Andsjudaan* and *Haltüt*, which Word *Dioscorides* renders *σαλφιον*; and *Mathiolus*, *Laserpitium*. In its own Country both the Root and the Juice it affords, are called *Hingiseb*, and in *India*, *Hüng*. But in common Speech the Word *Hingiseb* is used for the Plant, and *Hüng* for the Juice; and in these Senses I have used these Words in my present Description. Whence the Name *Afa* is derived or corrupted, I enquire not. The *Germans* from its strong and offensive Smell give it the Name of *the Devil's Dung*. I give you here a genuine History of this Plant (which by the Conjectures of Botanists hath been referred to several different Species, and by the famous Criticks, *Scaliger* and *Salmasius*, set forth by its proper Marks and Names) from my own Inspection and Observation of it, having for that Purpose taken a tedious and fatiguing Journey from the City of *Gamroon* to the Country where it grows. *Persia* only is its native Country, not *Media*, *Lybia*, *Syria*, or *Cyrene*: Wherefore all the several Distinctions that are to be found in Authors, between the Juice of this or that Country's Growth are insignificant. I was informed by two *Chinese* Dealers in Spices, that this Plant grows in their Country near the \* *Walls*, and hath a Juice gathered from it; but I am not satisfied of the Truth of this, because I do not find any Mention made of this Plant in the *Chinese* Herbal, for the importing the Gum by the Way of the *Wall* may have given Occasion to such a Mistake among the Ignorant. There are at this Time but two Tracts of Land in *Persia* which produce this Plant, viz. the Fields and Mountains near *Heraat*, a Market Town in the Province of *Chorasaaan*, and a Range of Mountains in the Province of *Laar*, which reach from the River *Cuur* to the City of *Congo* along the Bay of *Persia*, at the Distance of two, or in other Places, three or more *Parasangs* from the Shore. But it is not in every Part of either of these Tracts, that the Plant yields any Plenty of Juice. But about *Heraat* that only which grows in the wild Champion Country, and in the Province of *Laar*, that only which is found upon the Mountains near the Town or Territory of *Disguun*. What grows on either Side of these Places, either yields a small Quantity of Juice, and is therefore not worth the Pains of gathering; or, if it will yield any, there is no body to gather it. For on this Side of *Disguun*, the Inhabitants of the Country, who are *Arabians*, Husbandmen brought over from the opposite Shore, and Strangers to every other Way of Life but as Shepherds, never attempt to gather any of it, but concern themselves only for the Supplies of a low and humble Life, which they lead in poor Tents, and become supine and thoughtless of every Thing beyond their own wretched Subsistence, and the Care of their little Flocks. Beyond this Place, i. e. *Disguun* the Plant is said to have lost almost all its offensive Smell, and grown so sweet, that the † *Goats* are fond of the Leaves, and feed themselves exceeding fat with them. To make them do so, i. e. grow fat, the Day before they graze there, they are fed once with Mountain Salt (the only Sort they have there) and for the first fourteen Days after they begin to feed on it, they are never suffered to drink. The Plant grows indifferently in Thickets and craggy Places, and indeed wherever the Wind scatters the Seeds; but most plentifully (and often at no more than a Foot's distance between the several Plants) in Places flatted and sunk into a Plain, as being fitter for retaining (and upon Account of the better Condition of the Soil) nourishing the Seed. It seldom grows in a moist or rich Soil; but more frequently in a stony rocky dry Soil with a small Mixture of Clay; and if the upper Part of the Land furnishes not Moisture enough, it supplies itself with it from below, by striking the deeper Root. The People of *Heraat*, account that which is called *Hingiseb*, and grows (they say) upon the Mountains and in the Woods of *Disguun*, a different Species from that which they call *Husjeb*, growing in their own Fields. The former (they tell you) affords but a small Quantity of Juice, and even that thin and weak; whereas theirs at *Heraat* yields abundance of Ouse more fat, unctuous, and foetid, and therefore much the better Sort. To try the Truth of this, and to observe in what Respects they differ'd, I carefully compar'd a Plant of the Growth of *Heraat* (which whilst I dwelt at *Gamroon* I procur'd from *Chorasania*, and had lost a great Part of its Strength) with one of *Disguun*, and I profess I found no Difference in the Shape. I then shew'd the Plant of *Disguun* to the Carriers of the *Afa* of *Heraat* (who yearly brought it to *Gamroon*) not telling them of which Growth it was, and they immediately declar'd it to be their own, the *Husjeb* Plant, the Parent of the true and genuine *Afa*: Whence I gather, that the Difference between the Plants of *Disguun* and *Heraat*, arises only from the Differ-

\* i. e. The Walls that divide China from Tartary.

† See Pliny and Theophrastus.



ence of Soil in those two Places. That of the Fields of *Chorasnia* is perhaps a fatter Soil, and therefore furnishes the Root with a larger Quantity of Juice, than the barren Ridges of the Mountains of *Laar* can afford it; to say nothing of the Juices of the Plants of each Province, which compar'd together afford not the least Suspicion that they are of a different Species; but are exactly alike, except in Cases where a Difference is made either by Adulteration, or by the Season or Manner in which they were gathered, as will appear more fully by what follows. The People of *Disguun* distinguish between the *Male* and *Female* Plants; those of the *former* Sex, they say, yield no Juice, but shoot up into a Stalk which produces Seed, and by that Means they die at the Root; the *latter*, afford the Juice, and have no Stalk; however this is a false Distinction, and made through Want of due Attention; for there is no Root ever found but what will yield Juice, if it be cut before it runs to Seed like Fennel; for it will, if left to itself, sooner or later shoot out a Stalk; after which being deprived of its *vital Moisture* it withers and dies, which is common to it, with most other Plants of the umbeliferous Kind. The Root is said to live a vast while, even to vie with the Life of a Man for Duration; wherefore 'tis no Wonder if the Roots sometimes be found of a monstrous Size. If the Nature of the Soil be such, that it rises not to a Head in the former Part of its Life (as it sometimes so happens) they affirm the Stem will grow to six Foot in Length, and to the Thickness of an ordinary Man's Wrist. In its middle Age 'tis as thick as a Man's Leg or Arm, and the Thickness got by one Year's Growth is that of one's Thumb; always answered with a proportionable Length. The Fibres around the Head are sometimes a Mark of Age, and I am apt to think they are the Remains of the Stalks of the Leaves which have fallen off, and were too nervous and firm for the Teeth of Time to destroy.

§ 3. All *Asa Fœtida* flows from the Root when 'tis cut, and none either flows of itself, or can by any Art be pressed out of the Stalk; that Distinction therefore of the famous *Wormius*, between the *Asa* of the Root and that of the Stalk, comes to nothing. A Root under four Years Growth yields very little Juice, and is never cut; but as it grows older and larger it yields proportionably more Liquor.

If it be taken out of the Earth and not cut till the next Day, yet a milky Juice will flow from it; such a Quantity of Juice it abounds with, that it becomes uncommonly heavy. If it be cut through cross-wise, its whole upper Surface will be overspread with this milky Juice, which springs up in a continued Line winding irregularly, as may be seen in the Figure annexed. If we observe the Root carefully, we shall not find it all of the same Substance, but in some Parts of a fibrous harder Substance, the Fibres running length-wise in an irregular Manner; and in others of a softer, more spongy and homogenous one; the latter seems design'd for retaining the Liquor and digesting it in its Vessels, the former for the Circulation and Conveyance of it to nourish the Stem: And I add also, that it contributes to the making the Root firmer and more durable, which is of itself brittle and fragile. When the Root is dry'd from all its Moisture, it loses all its softer Parts, and the fibrous ones only remaining, are contracted into a stringy Pith; but the rough Bark loses little of its Dimensions. The Liquor, when it first flows from out the Vessels of the Root, is very white, liquid and fat, exactly like the Cream of sweet Milk, and therefore not in the least clammy; but by being kept in the Air or Sun it changes its Colour to a light brown, and grows firmer and glutinous. Its Scent is the Test of its Excellency; the stronger it is, the better the *Asa*. When it first comes from the Root it is of a prodigious strong Scent, above what it is when grown firmer by Age, and arrives in *Europe*; indeed there is no Comparison between them; I dare affirm that one Drachm of *Asa* fresh from the Root will cast a stronger Smell, than a Hundred Pounds of such as is dried by long keeping, and is usually sold by our Druggists. When I returned from the Mountains I carried home with me a pretty many Roots (into a very large House with a Court in the midst of it) but they filled every Room in it with so noisome a Scent, that I was forced immediately to fling them away. When the *Casla* (a Word they use for a Drove of *Indian* Cattle, and their Drivers) arrives with *Asa* from *Chorasnia*, this sort of Ware is always unloaded in a Field at a good Distance from the City; but notwithstanding this, if the Wind blows from that Quarter, the whole Air of the Place is infected with its Stench. It must be carried into *India* in a Vessel by itself, not with any other Wares that are liable to be corrupted; for Experience teaches, that it will infect and spoil them every one, and does the same by all *Liquors*; especially those that are supposed to be drank. The *Vessel* in which I crossed over into *Arabia*, had one single Sack of *Herat Asa* hanging at her Stern, which made us horribly uneasy with its offensive Smell; and the Master of the Ship was apprehensive, that even in that little Way, it would do harm to the *Rose Water*, *Schiraz Wine*, and the *Partables* on board.



*Dioscorides*; B. 3. Chap. 78. has given us a long List of the Medicinal Virtues of *Asa*, and *Gazzias Arom. Hist.* B. 1. C. 3. has said a great deal of its Excellency that Way. The *Persian Physicians*, by Reason of the Nicety of that People, hardly ever use it. The *Peasants* of the Province of *Laar* became acquainted with its Efficacy in curing *Cholick Pains*, the *Dropsy*, and especially the Tympany, from the Advice of the *Banjans*. A Citizen of *Disguun* himself told me, that he was afflicted with it (the Tympany) and that by swallowing a *Bolus*, or large *Pill* of *Asa*, every Morning for six Weeks together, he was perfectly recovered. During this Course of *Asa*, the Wind discharged itself so frequently upwards and downwards, and was of so abominable a Scent, that he was forced to banish himself from all Society and Conversation. The *Seed* of the Plant has the same Effect, but in a less Degree, and therefore the *Indians* fetch it hence for Physical Uses. Wounds are said to be heal'd to a Miracle by the Application of *Asa* fresh gathered. If this Plant be laid in any Furrows where Water drains, and from thence runs into any Gardens or Groves of *Palm* or *Date-Trees*, that Water will kill all the Worms at the Root of any Plant whatsoever. The \* *Indians* (especially the *Banjans*) use *Asa* commonly in their *Sauces*. The famous *Renodæus* could hardly be brought to believe this Account of it given him by *Gazzia*; For (says he) if this be true, surely either *Asa Foetida* does not stink in India, or the Indian Palates are made of Brass. I my self have tasted Cakes that have been mixt with this Liquor, which have had a far more tolerable Relish than I expected from them. 'Tis a common Thing among *Banjans* to rub the Rims of their Cups with this Liquor, to raise an Appetite in those who were out of Order.

There is a very great Scuffle between the Men of *Heraat* and *Disguun*, whose *Asa* is to be preferred; each thinks to advance the Worth of their own Commodity by decrying the Value of the others. At *Heraat*, the *Asa* of the Mountains of *Disguun* is decried, as lean, dry and of a bastard Kind; whilst their own is declar'd to be fat, soft, and of the highest Scent. The Men of *Disguun* reply in Behalf of the *Asa*, that the Fatness of the *Heraat Asa* is not natural but forced, by their mixing it at its first gathering with the Cream of *Camels* or *Goats*; by this Means they think it does not harden so soon, nor will it keep so long of itself, as when it is thus sophisticated; thus (say they) the Buyer is cheated into a Belief, that what is really the Fatness of the Mixture, is the genuine Richness of the *Asa*. Envy and the Love of Gain engendered this Quarrel; but there is no Reason thence to conclude the *Asa's* of these two Places to be of a different *Species*; wherefore without Regard to this or any other Distinctions made by Druggists, I shall only distinguish between the Plants themselves and the *Asa* they produce, as they grew in *Fields* or *Mountains*; at *Heraat* or *Disguun*, or if you had rather use the Names of the Provinces they grew in, of *Chorasnia* or *Laar*; the one is for the most Part fatter and softer, and brought over wrapt in Sheep and Goats Skins, the other is drier and comes in Bags made of the Leaves of the wild *Palm-Tree*. As all my Observations were made upon the latter, so I here give you an Account of the Manner of gathering it, which is the same, with that of gathering the *Heraat Asa*, except in a very few Circumstances.

§ 4. The Harvest of *Hingisch* or *Asa* is gathered by some of the Inhabitants of the neighbouring Villages, but chiefly by the major Part of the People of *Disguun*, who are in all about three Hundred; and is compleated in four Seasons, or, which is the same, in going four Times from the City to the Hills where the *Hingisch* grows, which are some two, three, or four Parasangs distant from it. I will relate to you the Order of the several Times or Seasons, in which the Harvest was reaped by the People of *Disguun*, that Year I visited these Mountains, viz. Anno 1687. The Order indeed is always the same, tho' perhaps the Day on which they begin their Harvest, or the Distances between the several Seasons of it, be not always exactly the same.

#### First Season.

1. Before ever they began their Work, they made Enquiry what the foreign Demands for *Asa* were, that they might not spend their Time and Labour in vain; as soon then as they are assured of a Vent for it, they flock to the Mountains about the Middle of *April*, because that is the proper Season to prepare the Root for yielding its Moisture; of which the Paleness, drooping and withering of the Leaves, is a certain Sign. If the Peasants of the neighbouring Villages determine to gather any, they repair thither in the same Month. When they arrive, they disperse themselves and keep at a great Distance



from one another, so that they who have agreed to make one common Stock of what they gather, whether they are a single Family or a Number of Families related to each other, or the People of one particular Street thus agreed, pitch severally upon a certain Tract of the Mountain and gather there. Here each Man cheerfully falls to Work on the Plants he finds; and first, with a Spade takes away the Earth a little Distance around the Root, which is commonly a firm Sand or Gravel, to about a Span's Depth, so that the Root appears naked a good Height out of the Ground. Secondly, he takes the Stalks of the Leaves cross-wise in his Hand and twists them off from the Root, which in that Season of the Year is easily done; then takes off the rough Crown of Fibres from its Head, which appears underneath bald and wrinkled. Thirdly, with his Spade or Hand he breaks the Clods of Earth he dug up, and covers the Root again with them to the Top; and then upon the Earth he lays the Leaves he has pull'd off, or any other that chances to be near him, with a Stone upon them, lest the Wind, which is here often exceeding violent, should carry them away, and he at his Return not know where to find the Root.

N. B. The Reason of thus covering the Root is to defend it from the Sun's Heat; for were it exposed to it, it would in twenty four Hours putrify and yield no Profit to the Labourer. After they have thus prepared many Thousand Roots for gathering, (four or five Men usually prepare two Thousand) they leave the Mountains and return Home, having in about three Days Time finished the Labour of the first Season which they call *Kustian*, i. e. to kill, as if this were an *act* [or the Season] of Slaughter; because in this Season the Plants are condemned hereafter to dye, by being drain'd of their vital Juice.

#### Second Season.

After forty Days spent at Home (this Year they staid longer than they usually did) the whole Rout of Gatherers leave the City in the Evening, and in the Morning the twenty fifth of May arrive at the Mountains, they then divide themselves, and each Body goes to its allotted Tract of Ground, to collect the *Liquor* from the Roots prepar'd in the Manner describ'd above, which being here got together for the Nourishment of the Leaves, now all stagnates at the Top. The Instruments they had, were a sharp *Knife* for cutting the Root, a sort of Slice or Spattle made of Iron, broad at the End, to scrape the Juice from off the Root, a *Dish* or *Cup* fixed upon their Side to put the Juice into as they scraped it off, and two *Baskets* hanging by a *Yoke* from the Shoulders, in which they carry off the whole Quantity of Juice they gather. The Reader ought first to be told, that every Company divides its Portion of Land, and consequently the Roots therein into two Parts, and all in the Company work in each Part every *other* Day; because after the Root has afforded a good deal of Moisture, it requires Time both to yield fresh Liquor and to thicken what it has already yielded; that this may appear to the Eye, let the Reader view the Figure annex'd, which represents such a Part of a Mountain where the *Hingisch* grows, as much as is usually sufficient for one Company of Reapers. In this Figure, *A* is one Part, *B* another; I have drawn but one Root in each Part, because a single Root will serve to explain what I shall say, as well as a Multitude. Having said this, I proceed; In *A*, each Man takes a Root, and removes the Bundles of Leaves and throws by the Earth which covers the Top of it: He then cuts off the rough Top of it cross-wise and leaves the upper Surface concave, whither the Liquor flows, without any danger of running over, till after two Days 'tis scraped off. Then as in the former Season he again covers the Root from the Injuries of the Sun's Heat, and takes care to lay the Leaves over the Surface arch-wise, that they may not by pressing upon it wipe off the Juice. When their Task is finished for that Day, the next Day the twenty sixth of May, is spent from Day-break in the like Labour, in the other Part *B*: On the twenty seventh they re-visit the Part *A*, and after having taken away the Shelter of Leaves, they scrape off the Liquor they find at the Top of the Root and put it into the *Dish* that hangs by their Side. Then they take away a little more of the Earth about the upper Part of the Root, and with their Knife cut off the dry Surface about the Thickness of an Oat Straw; for 'tis enough, if just the outward Superficies be cut off which stoppt the Pores up, which (when that is removed) discharge themselves of their Liquor; and indeed they have experienced that the thinner the Parings are, the freer and more plentifully the Root flows again. The same Perswasion they have of the Preferableness of one Manner of cutting it which they require should be performed by *striking* the Knife through, and not the common Way of *drawing* it backward and forward; which they say doth not make it bleed so plentifully as the other; but let them answer for it that believe it.



*N. B.* The Reapers frequently empty the *Dishes* which hang by their Sides, and then put the Juice into larger Vessels; or pour it into Leaves upon the Ground, that the Sun's heat may stiffen it; by which Means also it loses its natural Whiteness, for its Substance being soft and differently situated, admits the Sun's Rays in a greater Quantity in some Parts than in others; I add also that its *Colour* may be affected by what it is *laid upon* when fresh gathered.

Thus after the Root is covered again the Work is done: On the twenty eighth the same Business is done and in the same Method in *B*. On the twenty ninth they return to the Part *A*; and when they have gathered the Liquor from the Root a *second Time*, they take away the Earth, cut it, and cover it again as before. On the thirtieth the Liquor in the Roots in the Part *B*, is gathered a second Time and the Roots cut, &c. This is the Work of the second Season, in which the Roots are thrice cut, and the Liquor that pours out of them *twice* gathered. Then each Man puts his whole Collection into the Baskets, which hang on each Side of him from a Yoke laid a-cross his Shoulders; and carries it away.

Each Company of four or five Men carry off about ten or twelve *Maan* of *Disguun*, i. e. about fifty German Pounds.

*N. B.* This *Afa* of the first gathering is not esteemed the *best*; but rather a *meaner* Sort.

### Third Season.

After ten Days Time (eight will do) allow'd for the Roots to supply themselves with fresh Liquor; on *June* 10. at Day-break they return to the Part *A*, and go on with their Harvest. Having remov'd the Shade of Leaves, and the Earth from about the Root as before, they scrape off the Liquor from the Top of it, and then cut it again and cover up the fresh Wound as before. On the eleventh they do the same in the Part *B*.

*N. B.* This Liquor, which in ten Days Time flows from the Roots in a larger Quantity, and is of a due Consistency, is called by a peculiar Name, viz. *Pispaas*, the other goes by the common Name of *Sjür*, i. e. *Milk*, from its Whiteness and want of Consistency. The *Pispaas* is commonly esteemed much better and is a great deal dearer than the *Sjür*, whether on Account of its Scarcity, or its greater Consistency, I know not; this I am sure of, that the *Sjür*, though 'tis thinner, is not of a worse Substance than the *Pispaas*; for if it be longer exposed to the Air it grows full as firm, and cannot be distinguished from it. I am apt therefore to think that a Mistake in the Matter might arise from hence, viz. the People of *Disguun* never before sold the *Afa Sjür* pure and genuine, but always mixt it with some nasty Stuff or other, which was easily done when it was fresh gathered, because it was so liquid and thin; whereas the *Pispaas* being much more consistent and firm will not mix with any other Thing, and is therefore sold neat and pure. All *Afa* is of itself simple and unmixed, therefore all heterogeneous Matter in *Afa* comes by Adulteration. The Reapers themselves confessed to me, that they used to mix with the *Sjür Afa*, not *Meal* or any Sort of sagapenous *Gum*, as most Writers have thought, but a *pure Clay* which was just at Hand on the Mountains, where they gather it. Most, they said, put an equal Quantity of this to their *Afa*; others twice as much; or in Proportion to their Desire of Profit; still putting in the more, the thinner the *Afa* was. This made the Price of this *Afa* very low; and after the Cheat was discovered the *Afa* of this sort was despised; and indeed they who thus adulterated it suffered enough for it; for no Body now would buy any *Disguun Afa* for fear of this Imposition. But that having now learned more Prudence, they no longer use any Kind of foreign Mixture, but put the *Afa's* of each Sort, and gathering promiscuously together, and carry it in Bundles to *Congo* and *Ormus*, whence 'tis exported. And that if there is yet any Mixture in it, it is through the Negligence of the Gatherers, in not covering the Roots carefully after they have cut them: Though indeed all their Care cannot prevent Dirt and Dust from falling from the Leaves that shade the Roots, or from being blown upon them by the Wind, which will in some Measure foul the Liquor.

On the twelfth Day in *A*, and on the thirteenth in *B*, they gather the Juice *Sjür* and cut and cover the Root again; on the fourteenth they do the same again in *A*, and on the fifteenth again in *B*. So the Roots after having yielded once the thicker *Afa Pispaas*, and twice the thinner *Sjür*, are left under their Covers.



*Fourth Season.*

After three Days stay at Home, on the Third of *July* they visit the Roots again; having been taught by Experience, that in a longer Intermiffion, after they have been so often drained of their Moisture, and brought nearer and nearer Death, they will be apt to putrify, and whatever Liquor they have then in them, would be lost by deferring the gathering of it any longer. The first Day is spent in gathering the *Afa Pifpaas* in *A*, in the manner before described. The fourth Day is spent in *B* in the same Work. On the fifth Day they gather *Afa Sjür* in *A*, and on the sixth in *B*. On the seventh Day the finishing Stroke is struck in *A*; they get what Juice they find there, and cut the Roots no further, but leave them uncovered, whereby the Air and Sun presently kill them. On the eighth Day they finish the Work in *B*, and leave the Roots, in the same manner, to take their Fate. Thus is the *Harvest* of *Hingifch* or *Afa* compleated.

This is the common Way of reaping hitherto used in the Mountains near *Disguun*, viz. in three Excursions to the Hills they gather the *Sjür Afa* eight Times, and the *Pifpaas* three Times, from each Root. But 'tis to be remembered that the larger Roots, *i. e.* such as are above twenty Years old, and are found in the furthest Parts of the Mountains, whither they cannot climb without great Difficulty, are not so soon done withal; but they will yield the *Afa Pifpaas* four or five Times, and the *Afa Sjür* so much oftener in Proportion. So that these Roots are not compleatly drained of their Juice till *September*. However, in these Mountains few Roots are found above ten Years old, and none ever exceed twenty. For the great Price that *Afa* hath bore for many Years together, made the Reapers gather all the Roots that ever they could find, so that there has not of late been Time enough allow'd for any to arrive at so great an Age and Bulk. The Roots being drain'd of their Moisture and left uncovered, do every one of them putrify: Though one of the Reapers affirmed to me upon his own Experience, that if they were covered with Earth they would grow again; but in this Point none of the rest agreed with him.

After such a particular Description of the Plant as this, and the manner of gathering the Juice, there will be little need of adding any thing more on those Heads from antient Writers; few of whom had ever seen the *Silphium* Plant, and most of them took what they delivered on the Authority of Fame and Credit of others: Whereas here we have the Authority of a Man who lived and conversed in its Native Country, and amongst the People who themselves gathered and prepared it, till it became a Gum fit to be sent over into Foreign Parts.

*Kempfer*, who was himself a Physician, seems either to take it for granted that every one knew its Excellencies and sovereign Virtues, or else cared not to explain what he thought should be kept a Mystery in the *re medicâ*; otherwise he would have given us more particular Accounts of the Opinions, which both Antients and Moderns have entertained of the Virtues of the *Silphium*, and its wonderful and surprising Effects, both inwardly taken, and outwardly apply'd.

To supply which Defect, without multiplying Authorities and Testimonies from *Dioscorides*, *Theophrastus*, &c. I shall refer the Reader to the Quotations in the Margin from \* *Galen* and † *Pliny*, as being the Sum of what the || others have said; and content my self

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\* Omnes Silphii partes flatulentæ magis sunt Efficiatæ, & proinde concoctu difficiles: Foris tamen impositæ Corpori efficaciores, & omnium potissimum liquor admodum trahentem facultatem obtinens; attamen Excrefcencias imminuendi & liquandi vim quandam propter jam dictam temperiem habentem. Liquor Cyrenæicus quidem omnes & caliditate & tenuitate exuperat & proinde etiam omnium maximè discutit. *Galen.*

† Usus Silphii in Medicinâ. Nam folia ad expurgandas Vulvas pellendosque emortuos partus decoquantur in Vino albo odorato, ut bibatur mensura acetabuli à Balneis. Radix prodest arteriis exasperatis, & collectionibus sanguinis illinitur: Sed in cibis concoquitur ægrè. Inflationes facit & ructus; Urinæ quoque noxia. Sugillatis cum vino & oleo amicissima, & cum cera Stumis. Verrucæ sedis crebriore ejus fustitu cadunt. Laser ejus (inter eximia Naturæ dona numeratum) per se algores exalfacit. Potum nervorum vitia extenuat. Fœminis datur in vino; & lanis mollibus admoveatur vulvæ ad menses ciendos; pedum clavos circum scarificatos ferro mixtum ceræ extrahit; Urinam ciet ciceris magnitudine dilutum. Andreas sponder copiosius sumptum, nec Inflationes facere & Concoctioni plurimum conferre senibus & fœminis: Item hyeme quàm æstate nilius; veruntamen aquam bibentibus, cavendumque ne qua intus sit exulceratio. Ab ægritudine recreationi efficax in cibo; tempestivè enim datum cauterii vim obtinet: Affueris etiam nilius quàm expertibus. Ad externa corporum indubitatæ Confessiones habet. Venena telorum & serpentium extinguit potum; ex aque vulneribus his circumlinitur; Scorpionum tantum plagis ex oleo; Ulceribus verò non maturefcenibus cum farina hordeacea vel sicca; Carbunculis cum ruta vel cum melle vel per se visco superlitum ut hæreat; sic & ad Canis morsus. Excrefcenibus circa sedem cum tegmine punici mali ex aceto decoctum. Clavis pedum, qui vulgò morticini appellantur, nitro mixto, antè subactum. Carnes replet cum vino & croco aut pipere aut murium simo & aceto. Perniones ex vino sovet, & ex oleo coctum imponitur. Sic & callo. Clavis pedum superratis præcipuè militaris



self to observe further here, that this Plant was formerly so highly esteemed for its delicate and rich Flavour in Sauces and Sallads, and so prized for its sovereign Uses in Physick, that it was dedicated to *Apollo*, and ordered to be hung up in his Temple at *Delphi*: And \* *Pliny* himself tells us of one single Plant brought to the Emperor *Nero*, as an extraordinary Present; and withal, that this Gum was then so greatly valued, that the *Romans* treasured up a considerable Quantity of it, till *Julius Cæsar* came and robb'd the Treasury, and with the Gold and Silver took this also away as a Thing of rare and extraordinary Worth. Nay, we are † told that the *Cyreneans* honoured the very Figure of it, by stamping it on the Reverse of their Coin; and that when they had a Mind to set forth the Excellence and superlative Virtue of any Thing, they would say proverbially it was as good as *Βάτλος Σίλφιον*.

Could we have it brought to us without those foul Mixtures of Earth, Clay or Meal, too often out of Covetousness incorporated with it, I doubt not at all, notwithstanding the Prejudices entertained against it, but it would soon recover its antient and established Reputation, which must have been founded upon some real and intrinsic Worth; since besides its medicinal Virtues occasionally made use of, as far as appears, they constantly mixt it with all their Sauces and Spoon-Meat, as a wonderful Restorer of lost Appetite, a Sweetener of the Blood, and a Strengthenener of the Stomach and masculine Vigour.

Notwithstanding what the learned Doctor above hath said with relation to this Plant, that it refuseth Art; and that all Accounts, both Antient and Modern, declare it incapable of removing, or of Culture, I am yet still far from being discouraged in my Hopes of getting some Time or other the noble *Silphium* amongst us alive: For I am persuaded, if some curious Persons of the *East-India* Company would but search and bring, we might soon be possessed of a better Treasure than is perhaps known at present in the whole *re medica*. As to its Culture, when we have once got it, (either in the Seed or Root) I have no Difficulty in my Mind about *that*, notwithstanding what is generally thought to be the Opinion of both Antients and Moderns. A few Years since, who would have thought (for it was thought impossible) that we could have brought the Fruit of the *Pine-Apple* to Perfection in *England*? And have we not now Oranges, Lemons, Pomgranates, Coffee, Capers, and what not, familiar amongst us? Beside, a small Quantity, one day's Allowance for the

tatis contra aquas malas, pestilentes tractus, vel dies. In tussi, uva, fellis veteri suffusione, hydropisi, raucitibus. Confestim enim purgat fauces vocemque reddit. Podagras in Spongia dilutum posca lenit. Pleuriticis in Sorbitione vinum poturis datur; contractionibus opisthotonicis, ciceris magnitudine cerâ circumlitum. In Angina gargarizatur Anhelatoribus, & in tussi vetustâ cum porro ex aceto datur: æque ex aceto his qui coagulum lactis sorbuerint. Præcordiorum vitiis syntecticis comitialibus in vino, in aqua mulsa linguæ paralyti. Coxendicibus & Lumborum doloribus cum decocto melle illinitur. Non censuerim, quod Authores suadent, cavernis dentium in dolore inditum cerâ includi, magno Experimento hominis, qui se eâ de causâ præcipitavit ex alto; quippe tauros inflammat naribus illitis, serpentes avidissimas vini admixtum rumpit; ideo nec inungi suaserim cum Attico melle, licet præcipiant. Quas habeat utilitatis admixtum aliis immensum est referre, & nos simplicia tractamus, quoniam in his naturam esse apparet, in illis conjecturam sæpius fallacim, nulli satis custodita in mixturis concordia naturæ ac repugnantia. *Plin. Nat. Hist. l. 22. cap. 23.*

¶ Vide Theophrast. & Dioscoridem, qui passim Virtutes easdem & quidem majores Silphio ascribunt. And among the more Modern, see the following Account given of it by Fuchsius a German Physician, who tells us the Plant grew commonly in his Country. Læserpitium nostrum ex traditione recentiorum unice Venenis adversatur. Item Pestilentie populariter grassantis arcet contagia. Lentitiam pituitosorum humorum incidit ac discutit; quapropter tussi quam frigus attulit, medetur. Crassa, quæ in thoraca coeunt, discutit. Coloris corporis bonitatem iis, qui eo vescuntur, efficit. Concretum in corpore lac & sanguinem resolvit. Stomachum esu corroborat. Pituitam ventriculi dejicit, & elanguescentum appetentiam invitat. Menses & urinam ciet. Rabiosi Canis morfu aut Serpentis ictu liberat, si contrita folia vulnere indantur. Hypochondriorum vitiis auxiliatur, item Lumborum doloribus. Carbunculos cum polenta tritum & impositum sanat. Cum vino potum rigores discutit. Herba ipsa in vino & aqua cocta vulnera interna glutinat. Et, in summa, omnia quæ Angelica vocata Herba, & majori efficacia, potest. Ut hinc etiam constet Osteritium à nostris nominatum easdem habere quas veterum Læserpitium, inefficaciores tamen, facultates. Quare, cum metus sit ne Læserpitium adulterinum, aut saltem non optimum ad nos afferatur, præstat nostro uti, quod scilicet exigua admodum pecuniâ comparari possit, & viribus satis efficax sit; nam eadem quæ Dioscorides & Plinius Læserpitio assignat, recentiorum testimonio præstare valet. *N. B.* Læserpitium Germanicum in horto divi Germani Pratenfis Parisiensis est multum. *Fuchsi Hist. Stirpium, cap. 292. Anno 1549.* Nullum Medicamentum simplex per totam Indiam majore est in usu quam Asa Foetida, tum in Medicamentis, tum in condiendis cibis (ut post Garciam testatur Bontius) ut propter hanc causam una sit cum Opio ex præcipuis Mercibus quæ per Indiam distrahuntur. Solent Baneanes & omnes Gentiles provinciarum Cambaie, qui à carniū esu abstinēt, Asam jusculis & oleribus suis commiscere, confricato primum ex eâ libere, nec alio condimento utuntur omnibus in cibis. Multa in hanc rem vide apud Garciam. Utuntur eâ medicamenti loco ad Appetitum prostratum excitandum, Ventriculum roborandum, flatu discutiendos, Venerem irritandam. Apud nos in Europâ præcipuus ejus usus est internus in Suffocatione uterinâ, peripneumoniâ & vulneribus. Extrinsecus in tumido Liene & Uteri Suffocatione paneritio (cum allio ovi alb. suscepto) *N.* Siquis Epilepsiæ obnoxius senserit suffitum ex Asa Foetida, & Cornu Caprino paroxysmo actutum corripitur. Idem *Rai Hist. Plant. l. 32. Tom. 2.*

\* *Plin. Nat. Hist. Lib. 19. Cap. 9.*

† *Spanheim, de Usu & Præst. Numif. Dissert. 4.*



*Persian King's Table*, is sufficient to do Wonders in Physick. And we may well be content with that till such Time as innocent Luxury, or a more elegant Way of living calls for a farther Demand, and makes the Effect of a laborious Diligence become almost necessary for the Health and Pleasure of Mankind.

We know the Art of removing *Exotics* and tender Plants was almost unknown in *Pliny's* Time; and I remember the *Roman* Soldiers and others were possess'd with a Notion that *Grapes* would not remove from *Italy* into the South Parts of *France*: But that the *Greeks* and *Romans* could not, or durst not attempt to remove a Vine, is no Argument that we cannot do it even with Ease and Pleasure. 'Tis a late Invention of the *Dutch* to carry *Acorns* to the *Cape of Good Hope*. And though forty Years ago none would have believed that the *English Oak* would have covered the *African Mountains*; yet now (it seems) they flourish there, as it were the Infant-Strength of some future Empire growing up to Manhood.

Besides again. Hath not Nature formed and designed the *Silphium* Plant for Propagation and Increase, by throwing up a tall Stalk, whereon is formed a ferulaceous Head full of Seeds, flat and oval? And is it not from these Seeds, scattered about by the Winds, that the Infant-Plants themselves arise and are increased, when they happen to fall into a suitable Soil and Situation, as a proper Matrix to nourish and give them Life? 'Tis then but following Nature, and imitating her Directions, and the Work is done.

Indeed, \* *Theophrastus* and † *Pliny* both speak of the *Silphium*, as a Plant that refuseth Culture, and of a wild untractable Nature; but even this they mention as a Thing of *hear-say*, not to be depended upon: For that there were || others that deny'd this, and affirmed the contrary even in those Days, saying it was made much better by Tillage. But whatsoever the Antients mean by its *refusing Culture*, and being of a *wild Nature*, there is no manner of Question to be made, but that it is to be raised from the Seed, as every Thing which bears Seed may, and as itself is raised in its Native Country, by the Seed's being carried about by the Wind. And indeed by repeated Accounts we have had from modern \* Authors, it hath actually been raised from the Seed, brought into many Parts of *Europe*, and is at this Day growing in *Italy*, *Germany*, and in *France*; tho' the same Authors own that it is not of so powerful a Nature; which in all Probability is owing to nothing but the want of Sun: And yet this Defect is to be easily supply'd by Art; as we see it is every Day done to very good Purpose, with respect to all other tender Exotics.

The chief Reason why this Endeavour of raising the Plant at home should be pursued, is, that we might at all Times have the Command of the green Leaves and Stalks, which are so highly extolled as sovereign Remedies, outwardly apply'd, by way of Poltice, in all violent Pains; such as *Gout*, *Sciatica*, and *Rheumatism*.

And then again; If we would consult the Palates of those, who understand good Eating, and would furnish them with Meats of the most sweet and delicious Flavour, I see nothing to hinder, but that if any Quantity of Seed could be procured, we might sow whole Fields of it, as we do *Clover*, with a View only of fattening and improving our Sheep; nay, and rendering them sound and wholesome when they are found to be otherwise. That these are the Properties of the *Silphium* Plants in their Native Country, and that this is the common Practice of the Farmers there, we have the undoubted Authorities of *Theophrastus* and † *Pliny*, who both report the strange Effects it hath on Cattle, especially Sheep, making them presently fat, and the Mutton to have a wonderful pleasant Taste; and withal, it generally restores those that are weak and unsound.

The Objection that naturally offers is, that our Climate is too cold for it, and therefore that it would be lost Labour. But this Objection in its utmost Strength, can only affect our *Winters*, and not our *Summers*: And then if the Seed, like that of Barley, Oats, and Pease, be sown in the Spring, with a View only of having it eaten up in the Summer with Sheep, in order to have a greater Delicacy than can be had off *Bagshot-Heath*; who would not lay aside his *Clover*, and introduce the *Silphium*? At least, who would not try in small Quantities, as an Essay for Treasures and future Riches? Neither is it certain that our Winters will kill the Plant. We have Instances of many Plants from foreign

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\* Ἰδιὸν δὲ τὸ φέρειν τὴν ἑσπερίαν, &c. Theophr. l. 6. c. 3. † Rem feram ac contumacem, & si coleretur in desertis ingentem, Plin. l. 19. c. 3. || See Theophr. Chap. above. \* Fuchsius, cap. de Laterpitio. Lovel, Garcias, Ray, &c. † Ἀμα ἂν εἴη τὸ ἕκαστον τῶν ἀφ' ἑαυτοῦ ὁ καθ' αὐτὸν καὶ ἀπὸ τῆς αἰχμῆς τοῦ σπέρματος, καὶ τὰ κρεῖα σαυμάτῳ πονεῖ τῇ ἡδονῇ. Theophr. lib. 6. cap. 3. Hujus folia Malpetum vocabant; veluti pecora folia primoque purgari, mox pinquere, carne mirabilem in modum, jucunda. *deam*; Si quando invidu pecus in spem natecens, hoc deprehenditur signo, ove cum comederit dormiente protinus, Capra Sternutante.—Pecora agra sanari, aut protinus mori, quod paucis accidere. Plin. Nat. Hist. Lib. 19. cap. 3. passim.



Parts in the same Latitude with *Persia* or *Cyrene*, that are found to bear our Winters pretty well, even beyond Expectation; or if some of them are killed to the Ground, we find with Pleasure they have generally a Resurrection from the Root, if large or extended. And then if a Field of *Silphium*, eaten to the Ground in Summer with fat Sheep, shall afterwards afford a Succession of annual Crops, and be as lasting as *Saintfoin*, and of infinitely greater Virtues, what an Improvement in Husbandry would here be introduced amongst us, besides a Treasury of one of the best Medicines both for Man and Beast?

These things I offer, not as airy Suppositions, but as probable Speculations; being sanguine enough to hope that one Time or other, by the Means of some enterprising Genius, the *Asa* or *Silphium* Plant, so highly extolled both by Antients and Moderns for its wonderful Virtues, may be introduced *alive* amongst us; that we may every day more and more experience that Blessing and Bounty which the great Author of Nature intended for the universal Comfort and Pleasure of Mankind.

I hope I need not make any Apology for being thus particular on a Plant so useful, and so little understood. And although it is at present an Exotic (with which I am not now concerned) yet because it is so useful an Ingredient in a Sallad, and being not out of Hopes to naturalize it amongst us, I was willing to do it that Justice, and give it that Precedence, which its Virtue and singular Nature might justly require.

Thus I have particularly described the Nature and Virtue of every single Plant fit for the Composition of a Sallad, that every one may mix and sort them so as may be most agreeable to his own Palate. The great Art in the proper Mixture lieth in rightly considering the peculiar *Relish* of the several Sallad Herbs, *viz.* which are most hot and biting; as *Cresses*, *Mustard*, *Sellery*, *Scurvygrass*, *Terragon*, &c. and then which are more cool and insipid; as *Spinage*, *Corn Sallad*, *Lettuce*, *Endive* and *Purslain*, and the like. For after this Knowledge is once attained from the foregoing Descriptions, it will be no difficult Matter to compose a well relished Sallad, where the *biting Taste* of one Kind may not overpower the *Sweetness* of the rest; discreetly making use of some of the more insipid sorts to qualify the Heat and Pungency of others; still supposing that the discreet Gatherer hath a regard to the Season of the Year, and then every Sallad may be made, not only agreeable to the *Taste*, but safe and wholesome to the *Body*.

That seems therefore to be an extravagant Fancy which some have entertained, *That a Fool is as fit to be a Gatherer of a Sallad as a wiser Man*. And the Mistake is founded upon this Imagination, as if any thing that is but green, young and tender, is a fit Ingredient for a Sallad in the Spring. Whereas, Experience shews how many fatal Mistakes have been committed by those who took the deadly *Hemlocks* and *Aconits* for *Parsley* and *Parsnips*; *Dogs Mercury* instead of *Spinage*; *Cow-weed* for *Chervil*, and *Thrapfia* for *Fennel*. These Mistakes have sometimes proved immediate Death, and they must always prove hurtful to the Brain, and unwholesome to the Body. So highly necessary is it, that a discreet and skillful Choice be made, not from *Names*, but from the *Nature* of Plants in our own Climate rightly understood: And it is certainly the Interest of Mankind, that all Persons should be cautioned of being too bold in adventuring upon any *unknown* or *uncertain* Herbs and Plants, to the Prejudice of their Health, or the Ruin of their Constitution.

I have already observed how necessary it is, that in the mixing of a Sallad, every sort should come in to bear its Part, without being overpowered by another of a stronger Taste, that the Native Virtue and true Relish of *any* may not be wholly lost; that there may be something the same Analogy in *Taste*, as there is in musical *Notes*; nothing harsh or grating, but that the Whole may prove an agreeable *Composition*. Thus *Damonemus* introduceth a comical Cook, who, when he was ask'd what Harmony there was in Meats; answer'd, *The very same that a Diatessaron, Diapente, and Diapason have one to another in a Consort of Musick*. *Athenæus* makes a very diverting Scene of it; \* and the Application seems to be very just.

\* Athen. lib. 23. Horace seems to have much the same Notion. Stat. Lib. 2.

Nec sibi cœnarum quivis temerè arroget artem,  
Non prius exactâ tenui ratione saporum.

And our elegant Milton introduces Eve dressing a Sallad, in *Paradise Lost*.

What Choice to chuse for Delicacy best,  
What Order so contriv'd as not to mix  
Tastes not well joined, inelegant, but bring  
Taste after Taste upheld by kindest Change.



From what hath been said, it sufficiently appears that Wisdom and Judgment are necessary Qualifications for a Composer of a Sallad. And to be an exact Critick indeed, he should be skilled in the Degrees, Terms, and various Species of Tastes, according to a Scheme set down in the Tables of the learned Dr. Grew, (*Lect. 6. Chap. 2, 3*) to which the Curious are directed. But Mr. Evelyn, something more to our present Purpose, besides giving us a Table of Herbs proper for every Month in the Year, with their Proportions, hath laid down Nine Rules for preparatory Ingredients, which I shall but just mention, and refer the Reader (if he wants them) to his fuller Instructions and Tables, (*Evelyn, Acet. p. 96, &c.*)

(1.) Preparatory to the dressing, let your herby Ingredients be exquisitely cull'd and cleansed of all Worm-eaten, spotted or vitiated Leaves, and these rather discreetly *sprinkled*, than overmuch *jobb'd* with Spring-Water; after which, swing them gently in a clean Napkin, till they are fit to receive the *Intinctus* following: *viz.* (2.) Good Oil, an Ingredient so indispensably and highly necessary, as to have obtained the Name, *Cibarium* (with us *Sallad-Oil*) that it be not high coloured nor yellow; but rather of a pallid *Olive Green*, without Smell, and no otherwise affecting the Tongue, but as it is smooth, light and pleasant. (3.) That the Vinegar and other liquid Acids be perfectly clear and without Corruption, drawn and distilled from Wine, and some think still improved, if infused with Clove-Gilliflowers, Elder, Roses, or *Nasturtium*. (4.) That the Salt be of the brightest grey Salt, dried and contused, as being then the least corrosive. Some indeed are apt to affect *Sugar*, but what we find to be most esteemed by learned Palates, is the *grateful saline acid Point*. Some recommend the essential Salts and Spirits of the most sanative Vegetables, as the most healing, cooling, generous, and refreshing Cordial. But since the Learned differ in this Point, and question whether all the fixed Salts made the common Way be any whit better than our common Salt, it may suffice that the Sallad-Salt be the best ordinary sort, bright, dry and without Clamminess. (5.) That the Mustard (another noble Ingredient) be of the best *Tewksbury*. *N. B.* The Mustard growing, and there by a peculiar Art freed from the bitter brown Husk and made into fine Powder, at and about *Durham*, much to be preferred, it being from all Parts sent for and much admired. They preserve the Flower and Dust of the bruised Seed, which resembles *Brazil-Snuff*, in a well stop'd Glass, to temper it with Water and have it fresh when they please, it being fit to eat a few Minutes after 'tis mixt with Water. But what is yet by some esteemed beyond all these, is composed of the dried Seed of the *Indian Nasturtium* reduced to Powder, and mixt with a little Leaven, and so from Time to Time made fresh; as indeed, all other Mustard should be. (6.) That the Pepper, black or white, be not bruised to too small a Dust, which is reckoned prejudicial. The Root of the *minor Pimpinella*, or small *Burnet* *Salsifrage*, being dried, is by some extolled beyond all other Peppers, and more wholesome. The German Housewives have a way of mingling *Saffron* with Honey made up into Balls, which when dried, they afterwards reduce to Powder, and sprinkle it over their Sallads for a noble Cordial. The Spaniards and Italians also make great Use of this Flower, mingling its golden Tincture with almost every Thing they eat: But we are apt to think it too prevalent in our Sallads. (7.) That there be the Yolks of new laid Eggs boiled moderately hard to be mingled with the Mustard, Oil, and Vinegar. (8.) (According to the Super-curious) that the Knife with which the Sallad Herbs are cut, especially *Oranges*, *Lemons*, be of *Silver*, and by no means of *Steel*, which all Acids are apt to corrode, and retain a metallic Relish of. (Lastly) That the Sallad Dishes be either *China* or *Delf Ware*, *Pewter*, or even *Silver*, not at all so well agreeing with Oil and Vinegar, which leave their several Tinctures. The liquid Vehicles may be mixt first in a separate Plate; and then with a Fork and Spoon kept continually stirred, all the Furniture may be equally moistened. But some, who are Husbands of their Oil, pour on at first the Oil alone, as more apt to communicate and diffuse its Slipperiness, than when it is mingled with Acids.

The Sallad-dresser being now furnished with proper Ingredients, and sufficiently instructed in the Virtues, Nature and Property of every Herb, I may well suppose him in Time to become an accomplished Artist, having always Wisdom and Discretion (*pro hic & nunc*) to know what to chuse and what to refuse: But if he wants further Assistance, let him have recourse to Mr. Evelyn's Table and List, calculated for all Seasons.



## C H A P. VII.

*Of Pot and Aromatick Herbs.*

**T**HERE are yet some *Aromatick* Herbs commonly used in the Kitchen, which may well deserve our Notice. For though their Culture be not difficult, their Nature, Property and Use, may not possibly be so well understood.

I shall begin with two very useful and excellent Plants. *Rosemary* and *Lavender*, both great *Cephalicks*, and sovereignly useful for the Memory, Sight, and Nerves. They are both beautiful and lasting *Ever-greens*; love a dry, warm and sandy Soil; for too much wet in Winter is apt to destroy them. They are easily raised from Slips of the last Year, planted in *April*. Of *Rosemary*, there are several sorts, the *Common*, the *broad Leav'd*, the *gilt* with *yellow*, and the *Silver strip'd*: Beside these, there is the *double flow'ed*, whose Leaves are bigger, its Stalks stiffer, and bearing many double pale blue Flowers. The strip'd sorts are most tender; but the common and broad-leaved are hardy enough to resist our ordinary Winters, and to be cut into any Form, provided they be not too much exposed to *North* Winds. *Lavender*, to say nothing of its great Use in *distilling*, makes a fine Edging in large Gardens, provided it be frequently cut: But for the sake of its Flowers, which are much used by the Apothecaries, there ought to be a Plantation of it apart; for were the Edgings suffered to flower, a great part of their Beauty would be lost. There is another Plant called *Lavender Cotton*, propagated like the other, and makes also a very beautiful Edging for large Walks.

*Thyme.*] *Thyme* is another *Aromatick* Herb, very useful both in the Garden and the Kitchen; for it should be always at the Cook's right Hand, and every one knows it makes the prettiest Borders along the sides of Gravel-Walks, and will last several Years, if it be frequently and seasonably, after Rain, clip'd as it ought. But because it is easily raised both from Seed and Cuttings, it should be renewed once in four or five Years, still remembering at every new Plantation to renew the Soil. There are several sorts of it, and some of them prettily and differently variegated, which add to their Beauty in Borders. There is a *Mastick* *Thyme* much admired for its Smell in *Poseys*; as also the *Marum Syriacum*, which gives a very refreshing Pungency to the Nose, when rub'd betwixt the Thumb and the Finger, and this gives it a Place in Pots, even in the Ladies Chambers. Whether the Smell of it causes an Aversion or Frenzy in Cats, cannot certainly be determined; but they alway (if they can come at it) rub and tear it, till they quite destroy it; and therefore not only to prevent this Mischief, but to preserve it from the Severity of the Winter, it should be set in Pots and guarded with Wire-Lattice. Some uphold the Pots with Iron-Hoops driven into a *South* Wall.

*Hyssop.*] *Hyssop* is also a Plant both for *distilling* and Borders, and may be raised either from Seed or Slips in *March* and *April*. There is a sort of it prettily variegated, which adds to its Beauty set for Borders.

*Rhue.*] We have two sorts of *Rhue*, the one variegated with a Cream colour, the other of a pale green. Both are excellent for Borders, if well clip'd. It is easily propagated by Slips in a wet Season. Its strong Smell is supposed to be a good Guard against Infection; but perhaps it may be dangerous to trust too much to its Power and Influence.

*Tansy.*] *Tansy* is encreased by parting the Roots in the Spring; and hath been formerly in much Esteem for Kitchen-Use; but being of a hot and domineering Relish, it is but little used, except in a Dainty which itself gives a Name to. There is a sort of it which is prettily strip'd. But Mr. *Bradley* is so in Love with this Plant, that he thinks there ought always to be some of it kept dry in the Winter; particularly for the Use of those who fear the Gout in the Stomach: And because I would always help to propagate *Good Nature*; his *Nosstrum* in the Use of *Tansy* is this. "Boil half a handful of this Herb in half a Pint of strong white *Wine*; so drink the Decoction as hot as possible." This he saith, he always found would remove the Pain in a quarter of an hour.

*Savory.*] There is a Summer and a Winter-*Savory*. The first is an annual Plant raised by Seed; the other is perpetual, encreased by Seeds or Slips, and will endure a hard Winter. This is another Kitchen-Herb grown out of date by reason of its too rank Flavour.

*Marjoram.*] We have also two sorts of *Marjoram*; the one called Winter-sweet or Pot-*Marjoram*, which is sometimes prettily strip'd with yellow, and will last three or four Years, well enduring the Winter cold; the other is the annual *Sweet-Marjoram*, raised either in a

Hot-



Hot-Bed, or in a fine warm Soil in *April*; this is accounted a very agreeable Perfume in a Posy of Flowers, and is not less useful in the Kitchen all the Year, even when dry'd in the Winter. The first is easily propagated from Slips in the Spring, or in any moist Season.

*Penny-Royal* and *Camomile*.] *Penny-Royal* and *Camomile* are both useful Plants, chiefly in physical Preparations: But as there is a constant Demand for them, they should not be wanting in the Garden, where they will grow almost in any Soil; but chiefly in moist and shady Places, and are propagated from Slips.

*Angelica*.] *Angelica* is a large Plant, running up with a Stalk five or six Foot high, and is raised from Seeds sown in a moist and rich Ground. In *July* and *August* it puts forth large Tufts of beautiful Flowers; but where the Seeds are left to ripen, there the Plant commonly dies. But if it is frequently cut, it will last good for several Years, and is of great Use, especially to Confectioners.

*Carduus*.] The *Carduus* sown in Gardens, for its Virtue in physical Uses, hath obtained the Name of *Benedictus*, or the *Blessed Thistle*. The Demand for it is so frequent for Vomiting, &c. that it should be annually sowed, either in the Autumn or Spring. The first Season produceth the best and largest Plants.

*Clary*, *Wormwood*, and *Dill*, are so well known, and so easily raised, that it is sufficient only to mention them as useful in a Garden. However, it may not be amiss to say, that both the *Bush* and the *Sweet Basil* are pretty beautiful odoriferous Plants much admired by the Ladies, and therefore should be propagated for the sake of their Beauty when set in Pots in their Chambers; and for the Sweetness of their Leaves. They should *both* be sown in Hot-Beds to accelerate their Growth, and complete their size, and afterwards transplanted into Pots, or other Parts of the Garden, where Sweetness and Ornament is most required.



## C H A P. VIII.

*Of the Nature, Properties, and great Advantages of Untried Earth, both in the Fruit and the Kitchen Garden.*

**H**AVING hitherto treated fully and particularly both of the *Fruit* and *Kitchen-Garden*; shewing the best Methods of raising, planting, and propagating of Fruit-Trees, and of sowing and encreasing all sorts of *Legumes*, Herbs and Plants, I might still be thought defective, if I did not recommend some one particular sort of Earth, or Compost, wherein to plant and sow Trees and Herbs, as what might prove of most general Advantage to the Planter and Sower, and answer the desired End and Purpose of Health and Salubrity to Trees, and a true Relish and Wholesomeness to Herbs and Fruit. This I have already, in a former Treatise (*Gentleman's Recreation*) advised and recommended by the Name of *Untried Earth*, and withal directed where to find it. But forasmuch as what I have there said is thought too general, and the World is not yet sufficiently apprized of its Excellence and Virtue, but are still loading in Dung amongst their Fruit-Trees and Plants, to the great Hurt and Corruption of both, and to the vitiating the natural Juices of Fruits and Herbs, with the unwholesome and indigested Steams arising from Dung of all Kinds, I shall think my self obliged to say something more particularly about the Nature and Virtues of *Untried Earth*.

By *Untried Earth*, I would be understood to mean all such warm, mellow, rich Soil, as lieth next and underneath the Surface of some *Meadow*, *Pasture*, or *Waste*, where Cattle have been of long Time wont to lie at their Ease, and where neither Plough nor Spade have ever, or at least not within the Memory of Man, been used: And this, if it be rightly and discreetly chosen, commonly holds good from six to ten or twelve Inches deep after the Turf is pared off, and sometimes a great deal more. Some have made it a Difficulty, as if this was hard to be found in any Quantity. Whereas I have never yet come into that Lordship or Country, (whether open Field or enclosed) but I could always find out a sufficient Quantity to supply the Wants of the curious; for the incurious are *most* and *many*. In many Places there is a large green Turf or open Waste in the middle of a Parish; and this seldom fails to be good, being enriched from Time to Time with the Dung of Cattle, Geese, and other Fowl, and furnished with large Quantities of earthy



Particles fit for Vegetation, because not drawn forth by the Roots of various Vegetables.

In most Places there is some River, Rivulet, or Brook, which runs through Flats, Meadows, or Low Grounds: And *these* are commonly every Winter overflowed, and therefore receive abundance of rich new earthy Matter driven down from the Upper Grounds; and so obtain a constant Addition of Riches, and never have any exhausted, but what the Roots of Grass exhaust, which seldom run deeper than two Inches.

Sometimes even in the Highways there are great Opens of old Sward, under which is found excellent *Untried Earth*, fit for the Purposes we are speaking of. And I think all, both open Fields and Enclosures, must have considerable Quantities of old Soil never turned up, which either by Right or Favour may be made use of, without in the least injuring the Soil, the pared Turf being laid down in the Place again. Where-ever I have come I have never yet found much Difficulty to procure, one way or other, enough of this Earth to serve the Purposes both of my self and Friends. The greatest Difficulty hath been where the Country abounds with *Clay* lying very near the Surface, and the Soil to be improv'd is *Clay* too: But even in this Case, and amongst the worst of Clays at *Yelvertoft*, I always found, one where or other, some mixt loamy Soil, made good and rich by constant Superinductions of Sands driven down by Floods.

Having thus told you what *Untried Earth* is, and where to find it, I would fain make some such Impression upon the Mind and Judgment, and Reason, (where likewise all Impressions relating to Morality are only to be made) that when an *old Way*, introduced by Custom and Habit, is prov'd to be *wrong* and *false*, a *new* and *better* may take place, more agreeable to good Sense and later Experience. To this Purpose I would first observe to you from my own Experience, that from the Use of *Untried Earth* I have seen most surprising Productions, even beyond any artificial Amendments, both in the *Fruit* and *Kitchen-Garden*. And although this may seem romantick and strange to them who have not tried it; yet sure I am, and I lay an Emphasis upon it, that no sort of Composition made with Art, can be brought (to *equal* I was going to say, but for certain) to *exceed* in all respects this *Untried Earth*. For if the choicest and tenderest Fruit-Trees be planted in this Earth, they presently discover an uncommon Healthfulness and Vigour. If any of the tenderest sorts of *Annuals* be sown in this Earth, if it be discreetly chosen, you may soon perceive by their flourishing Looks and Colour, that they *like* the Soil. Nay, even *Melons* and *Cucumbers*, (a bold Word to speak, you'll say) need no other Compost or Riches to bring them to their Maturity and Richness of Taste. Our want of Sun indeed puts us under a Necessity of accelerating their Growth by adding artificial Heats from *long Dung*; but that Consideration comes not into any part of our present Reasoning; because the Roots of Plants are not supposed to get (and it is granted they do not get) any Substance or Vigour from thence, but *Heat* alone; whereby the earthy Particles are put in Motion and made to ascend freer and faster than they would otherwise do; which causes such Plants to ripen within the compass of our Summers, which otherwise they could not possibly do for want of *Heat*.

But indeed the Excellence and Richness of this Earth is most and best seen in the Verdure, Fruitfulness, and large Production of such Plants as ripen with the Sun, and need no artificial Heat; such as Asparagus, Artichokes, &c. These arrive not only to equal size, and make Heads as large as those planted in artificial *Earths*; but do acquire an *even*, *regular* and *pleasant* Flavour from the well digested Matter or earthy Particles in which they grow, and which actually ascend in their Vessels towards their Encrease. In short, in all such Cases as serve to make a Garden fruitful and profitable, I prefer *Untried Earth* to the best of even *rotten Dungs*, or the common artificial Composts, with which our Books of Gardening, as well as the Gardens themselves, are so commonly stuffed and filled. And that for these following Reasons:

1. This *Virgin Earth* is not infected with the Seeds of such Weeds as are ordinarily carried about in the Air from Place to Place, because being covered with a Thick-set Turf, noxious Weeds can find no Place to fix themselves; and so they die and perish soon after their Fall; whereas all artificial Composts, that are made with Dung and laid in Heaps together to rot and mellow, are subject to receive the Infection of the aforesaid Weeds; and accordingly Experience sheweth that such Composts and Manures, especially in light Soils, bring such intolerable Poisons, and such a multitude of new Weeds along with them as no Care or Art can quickly root out again.

2. Because *Virgin Earth* affords better and *wholesomer* Productions than can reasonably be expected from Soils made with Art and Dung; which tho' they are filled with nitrous and sulphurous Matter, fit to set the earthy Particles in Motion for the Growth and Increase  
of



of Plants and Trees; yet they also send up many mixt heterogeneous indigested Juices, which give *unfavoury* and sometimes *unwholsome* Tastes to Leaves and Fruit: Whereas, Earth taken from under an old Turf, hath all the Richness of *Nitre* and *Sulphur* requisite for the Purpose of Vegetation, and at the same Time its earthy Particles so well mixt and incorporated, all its Juices so well mellowed and refined by Age, that they only want to be stirred and exposed to the kind Influence of the Air, Rain, and Dew, to be made to exert themselves, by passing through the Vessels of Plants and Trees, for their Increase and the wholesome Productions of Nature. And this I should think may suffice to regulate the Culture of Plants as a Thing of no small Importance; because as a *Tree*, so also the *Soil* is known by its Fruit discovered by the Taste. The difference of the Goodness of such Plants and Sallading as are raised and brought us from fresh Land out of the Country, compared with those which the Avarice of the Gardeners, or rather the Luxury of the Age tempts them even to *force* and *resuscitate*, is most discernible in the untimely and tasteless Articles of *Asparagus* at *Christmas*.

“ It is certain (saith Sir \**Thomas Brown*) that about populous Cities, where Grounds  
“ are over-forced for Fruit and early Sallading, nothing is more unwholesome. Men in the  
“ Country look so much more fresh and healthy, and commonly are longer lived than  
“ those who live in the Middle and Skirts of vast and crowded Cities, invironed with rot-  
“ ten Dung, loathsome and common Lay-stalls, whose noisome Steams wafted by the Wind,  
“ poison and infect the ambient Air and vital Spirits with those pernicious Exhalations and  
“ Materials, of which they make the Hot-Beds for the raising those *Præcoces* and forward  
“ Plants, which gratify wanton Palates. For those being corrupt in the *Original*, cannot  
“ but produce malignant and ill Effects to those who feed upon them ” It was also † Mr.  
*Evelyn*’s Opinion long since that there is nothing so proper for Sallad Herbs and Plants, as  
the *genial* and *natural* Mould impregnate with well digested Juices, without any Mixture of  
*Garbage*, *Carion*, and other filthy *Ordure*, perhaps not half consumed. I question not but  
that every Body would prefer Corn and all sorts of Grain raised from *Marle*, *Lime*, and  
‡ *Chalk*, sweet and natural *Soils* for Amendments, before that which is produced from the  
*Dung-hill* only. Even Experience shews that the *Rankness* of Dung is frequently the cause  
of *Blasts* and *Smuttiness* in Corn; as if the Author of Nature would thereby teach us to  
take heed of all unnatural and fordid Mixtures. It is the Observation of those who have  
been conversant in Vineyards, that Vines forced with Dung and growing in the Vales, pro-  
duce Wines much more *beady* and *unpalatable*, than those which grow on the sides of  
Hills and are less forced.

Monsieur *Quinteney* hath rightly observed, that the Sense of *smelling* is a proper Judge  
of the Goodness and Salubrity of Earth; and I would add also (setting aside too great  
Nicety) that the Sense of *Taste* is no less a Discerner of that Matter; and this Reason is  
to be assigned for both; because an *ill Smell* proceeding from Corruption or undue Mix-  
tures will give an *ill Taste*: And the Fruit or Product will taste accordingly. But still I  
add;

3. That though artificial Composts, if they have had sufficient Time to mellow and to  
lose the Unfavouriness of Dung, may be supposed to obtain most of the good Qualities of  
*Untried Earth*; yet here is a Treasure easier purchased, always ready at Hand, and imme-  
diately fit for Use. These are Considerations by no means to be passed over slightly: For  
were there no other Advantage but this; that *Untried Earth* answers all the Purposes of  
Dung, what a vast deal of Manure, unnecessarily loaded into a Garden, would be saved  
for the more useful and profitable Purposes of Meadows, Pastures, and Arable Land? If  
then I can make this rational Doctrine take place, as it ought; especially when confirmed  
by Experience, I shall expect the Thanks of the *Farmer* and the *Gardener*: Both the *one*  
and the *other* receiving great Advantages thereby. The *one* seeing his Barns filled with  
Plenty, arising from Treasures formerly wasted; and the *other* receiving the Commenda-  
tions of his grateful Master, for furnishing his Table with the best tasted *Herbs* and *Roots*,  
and the most delicious *Fruits*.

Now I am upon this Head, it may not be amiss to take Notice and advise that the  
Depth or Thickness of this *Earth* superinduced in the *Kitchen-Garden* is to be discretion-  
ally proportioned to the Nature of the Plants to be sown: *Onions*, *Lettuce*, *Spinage*, *Pease*, &c.  
which take but shallow Hold, will require only two or three Inches thickness: Whereas,

\* *Brown’s Mill.* † *Acet.* p. 132.

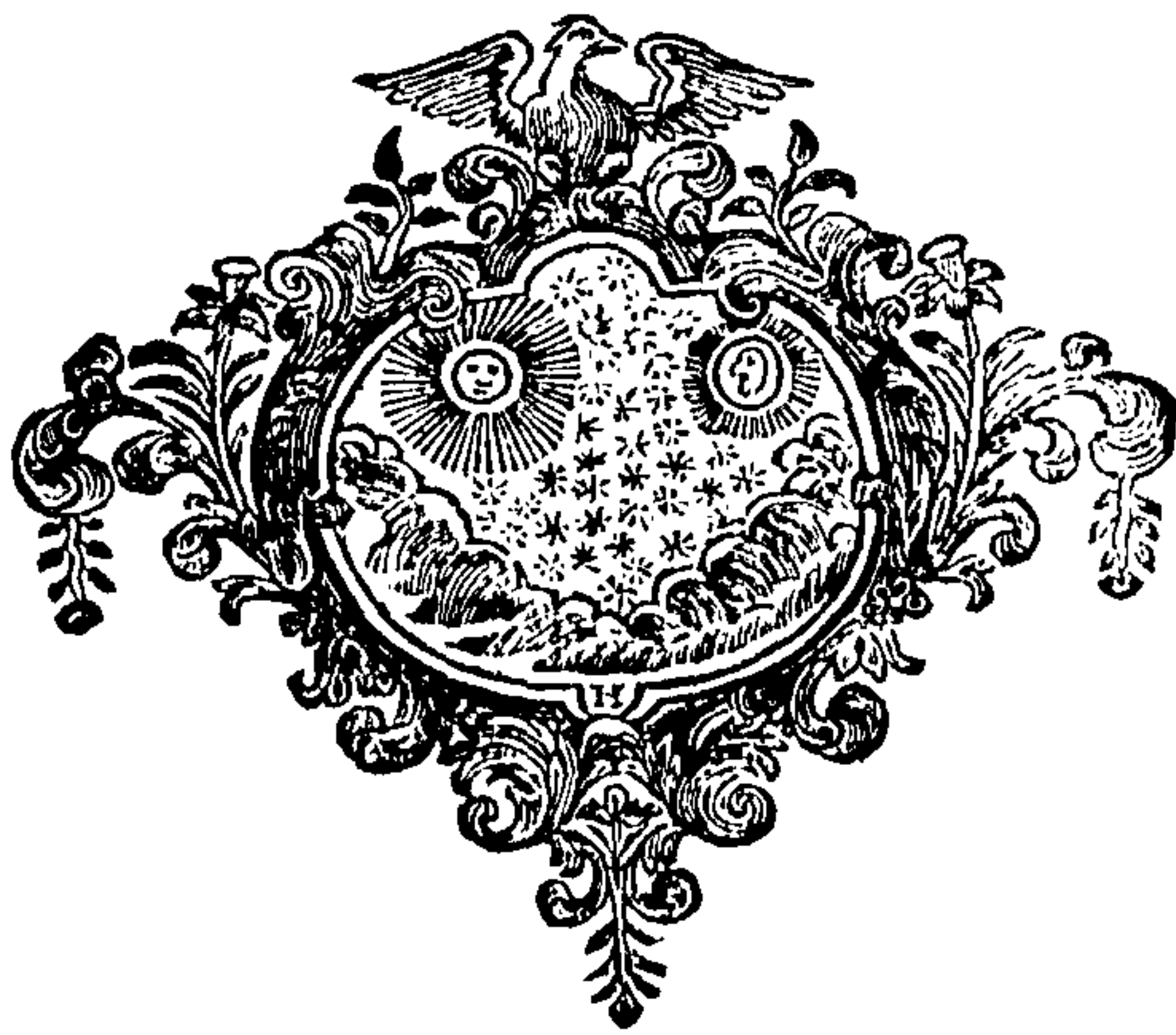
‡ *Caule suberbano, qui siccis crevit in Agris,*  
*Dulcior—Hor, Sat.*



*Carrots, Parsnips, Scorzonera and Skirrets*, which go deeper into the Ground, may require ten or twelve. The *first* Coat of Earth, discreetly stirred only with a Hough, will last good four or five Years, without any *Amendment*; and the *last*, because thicker and deeper, will continue good six or seven Years, stirred always with the Spade.

*N. B.* The Turf, which is pared off from the *Untried Earth*, if it is not required to be laid down again, may be laid on Heaps to rot for two or three Years; which, being now and then stirred, will prove excellent Soil for Amendments, and particularly good for a Superinduction to the Asparagus Bed; which being a Plant whose Pores and Vessels are very large, is very apt to admit every Nourishment of the grossest Nature, and consequently to receive a Relish and Tincture from all indigested Dungs and undue Mixtures.

From the Whole of what I have said upon this Head of *Untried Earth*, I think this Corollary of its Virtue and Excellence may fairly be deduced by Way of Analogy; that as it is found by long and constant Experience; that the animal Life in all Creatures is best preserved and continued by the simple and unmixed Products of Nature, and more particularly with respect to Mankind; that such Men as have but (as we say) from Hand to Mouth, and are constrained by Necessity to live upon *simple* Diets and the *natural* Food of their own Country, are for the most part healthier and longer lived, than those who indulge themselves by Excess, and by a wanton Luxury study to imbibe *all* that Art and Riches can procure, shortning their Days by the intemperate Use of mixt and unnatural Foods: So in like manner, *Vegetables* of all sorts, but especially Trees, from which are expected the annual Rewards of Fruit, as they will present their Fruit *more beautiful* and *better tasted*, so may well be supposed to be also *more lasting* and *durable*, being fed by *simple* and *unnatural* Diets.







A

NEW SYSTEM

OF

AGRICULTURE

AND

GARDENING.

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 BOOK V.
 

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*The Flower-Garden.*



AM now arrived to that Part of my Treatise of Vegetables which is not less (if not more) pleasant and delightful than what has gone before. The *Flower-Garden* indeed in the grosser Sense of the Word and in ordinary Acceptation, is not *profitable*, but the contrary. But if what tends to the Delight and Pleasure of Mankind; if what serves to transfer the Mind from the Beauty of the Thing formed to the glorious and wise Former and Contriver of all Things; if what gives an Opportunity to fill up the *Parenthesis* of Life (for some such there must be) with innocent Amusement and Satisfaction; if all or any of this may be called Benefit and Gain to a reasonable Creature, then the

C c c c

*Flower-*



*Flower-Garden* may well be said to be *profitable*, as it is universally allowed to be *pleasant*.

I would here I confess rather chuse, if the *Fair Sex* would give me Leave (and it shall be done with a great deal of Honour) to address my self to *them*. Multiplicity of Business and the necessary Affairs of Life do not ordinarily engross their Time; nor distract their Thoughts; these Severities are the Load and Complaint of our own Sex: And altho' the *Men* are hereby much diverted from the Amusements they would otherwise chuse; yet the *Women* are not generally under such Avocations, but have more Leisure to follow innocent Delights, and suitable Recreations. Thus if Inclination and Leisure could but once agree and unite, I flatter my self the Ladies would soon think that their vacant Hours in the Culture of the *Flower-Garden*, would be more innocently spent and with greater Satisfaction, than the common Talk over a Tea-Table; where Envy and Detraction so commonly preside.

Whereas, when Opportunity and Weather invite them amongst their Flowers, there they may dress, and admire, and cultivate Beauties like themselves, without *envying* or being *envied*. There they may dispose the great Variety of Colours, which Nature has given to several Flowers, and what Order and Mixture they please; and whilst they are admiring the Author of Nature for affording these elegant Glories, they may at the same Time please themselves and others with their own Fancy and Skill in *mixing* and *explaining* them.

I speak not this *exclusively*, as if I thought none but the Ladies should meddle with Flowers. The Study and Culture of the *Flower-Garden* hath been the Entertainment and Recreation of wise and good Men in all the Ages of the World, and they have always thought, from the Example of *Solomon* himself, that the more they unfold Nature's Beauty and Variety in every Part, the more extensive was the Pleasure, and the greater the Admiration of its Author.

It was indeed some Time before I came to take much Pleasure in the *Flower-Garden*, having been for several Years so wholly engaged in rectifying Mistakes, and making some intelligible Improvements in the more profitable Part of the *Fruit-Garden*: But I quickly found after I had once planted and disposed my Garden in the Order and Method agreeable to my own Fancy, there was always a considerable Part of the best Season in the Summer left, when there was almost nothing to be done by Way of Diversion, (at least not much manual Operation by Way of Exercise) except I could begin to think of loving and cultivating the *Flowers* as well as the *Fruits*: Still preserving the Maxim which I had always laid down to my self, and have since recommended to others, not to enlarge the Bounds of either Gardens too far, but rather strive to have *multum in parvo*.

After I have said thus much by Way of Introduction to what I have to say further about Flowers, their Culture and Propagation, I shall only here inform the Reader of the general Method I intend to pursue in treating of this Subject, which, because it hath been pretty much exhausted of late, and begins now to be generally well understood, I shall not dwell long upon, intending chiefly to explain what others have left in the Dark, and to say as little as possible upon that which every one understands. First, I shall speak of what appears to me to be the most proper Situation and Disposition of a Flower-Garden. Secondly, I shall treat of such Soils or Compositions of Earths as are found to be in the general most agreeable to Flowers. Thirdly, I shall treat of all the several Kinds of Flowers, great and small, usually known and growing with us in *England*; whether *Annuals* from Seeds, or *Perennials*, propagated from bulbous Roots, or Slips, or Layers.



## C H A P. I.

*Concerning the Situation and Disposition of the Flower-Garden.*

**W**HERE Election can take Place, one should always chuse to have the Flower-Garden near the dwelling House; because such Beauty and Ornament, the more they are under constant Inspection, the easier and better they entertain those two finer Senses, *Seeing* and *Smelling*. But then it is not with *Flowers* as it is with *Fruit*, the more Sun they have, the better; and therefore again, where Choice is to be had, I should prefer an *Eastern* Exposition, or if that cannot be had, a *Western*, rather than to let it lye open and entirely exposed to the Sun's hottest and *meridian* Rays, whereby they are apt too soon to hang their Heads, to wither away, and die.

There are indeed some sorts (as will be taken Notice of in its proper Place) that want the hottest Exposition to bring them to Maturity and Glory: But these are *Foreigners*, and naturalized here with Care and Art, and even *nursed* in a Hot-Bed. These therefore may either be set in Pots, and placed or moved occasionally as Fancy directs; or else may be planted by themselves under some Southern Borders near the House (but not to be dropp'd upon) where their Beauty may not be lost or overlook'd. But then as to most of our own *Natives*, such as Tulips, Ranunculus's, Emonies, &c. with these, it is certain, *too much* Sun is almost as bad as *too little*.

But there is a much worse Enemy to a Flower-Garden than this, which I am now to speak to and caution against in the Choice of a Situation; and that is, the *Wind*, that restless Enemy to all Vegetables; the Fury whereof, if not guarded against, is like some turbulent Spirits in the World, ever disturbing the Peace and Quiet of every Thing within their Reach. *Walls* are some Defence, where they are tall, and the Garden little; but otherwise they do but occasion great Reverberations, Whirles, and Currents of Wind, so that they often do more harm than good. I should therefore chuse to have the Flower-Garden encompassed with Hedges of *Eugh*, *Holly*, or *White-Thorn* (the first is abundantly the best) which after frequent Clippings, are not only more ornamental than the best Walls, but by far more useful, and are better Defences against the merciless Rage we are speaking of, both with Respect to the Flowers themselves, or the Female Lovers.

In speaking of the *Situation* and *Disposition* of a Flower-Garden, there should be also something said of the *Form* thereof; which though it must and will always vary according to Persons different *Fancies*; yet Fancy ought to be regulated by the general Principles of Beauty, and ought to throw the whole into Variety amidst Uniformity. And lest the Fancy should not be *humourfome* enough, Mr. Bradley has told us of a Method to diversify and enlarge it almost infinitely.

If the Rules of Proportion are but well observed, the more *plain* and *simple* the Figure, the more beautiful it will appear, the more agreeable, the more natural and unaffected. Most of the *studied* Plans do discover too much of the *tawdry* in them, and are comonly too confused to give any distinct Pleasure to the Eye, except it be whilst they are only exhibited on Paper.

But care must be taken to contrive it so that it may be easily seen, that the curious Artist may find Admittance to the Beds in every Part, either by the *large* or by *lesser* Gravel-Walks or Paths; so as by the Reach of the Arm every Operation may be performed with Ease. And I think I need but just say, the Center in the middle of the Circle should be filled with some curious Ever-green Plant cut *pyramidically*, and fluted either *perpendicularly* or in a *spiral* Line. But I must not enter into farther Particulars; for after all, the Florist will and must be left to his own Fancy.

*N. B.* All tall Flowers should be excluded this Plan; for they will do better dispersed in Borders elsewhere, where they may have room to extend their Leaves and Branches.



## C H A P. II.

*Of such Soils and Compositions of Earths as are found to be in the general most agreeable to Flowers.*

I HAVE long observed that a hot Soil and scorching Sand, though never so rich, is as bad for most of our finest Flowers as too much Sun, and that in the general a moderate Degree of *Coolness* and *Moisture* in a Soil is best. For which Reason, if a proper *Untried Earth* can be found with those two Qualities, no Composition of Art can exceed it; and therefore this in the first Place should be diligently sought for, and discreetly chosen as a Treasure in the *Flower*, as well as the *Fruit-Garden*, for the same Reasons as are assigned in the Chapter of *Untried Earth*. (See Page 277.)

But forasmuch as it may be difficult, and sometimes impossible to procure this Earth in sufficient Quantities, and to entire Satisfaction, with respect to Richness and other requisite Qualities, I shall lay down some short Rules and Helps, which every ingenious Person may easily enlarge or improve, as Situation and Circumstances may require.

It will easily be perceived by what I have already said, that *Horse-dung*, from its Nature and Qualities (especially if not quite rotted to Earth) is *Poison*, and greatly hurtful to most Flowers: And if it is reduced to Earth, its Lightness and hot Nature must be qualify'd with other Compositions: But the best Way of all is to banish it. *Strong Clays* on the Surface are also on the other Side very undesirable, as they chill, and starve, and bind the tender Fibres of Flowers; so that they cannot extend themselves to fetch proper Nourishment for their Increase, and to support their Health. But it is seldom seen, but that on the strongest natural Clays there will be five or six Inches of good loamy Earth on the Top; and that is sufficient, if Care be taken to carry off the wet by Drains into the lower Grounds at a Distance. The contrary to *cold Clays*, and equally undesirable, is *hot and dry Sand*. Each of these must have different Remedies.

To the cold Clays must be mixt or superinduced large Quantities of such *Untried Earth* as is found to be rich, light, and sandy; or if this cannot easily be met with, rich and light enough, let a third Part of *Horse-dung* thoroughly rotted to Mould be added. To the naturally hot and dry Sands must be added and mixt rotten *Hogs* or *Cow-dung*, which hath the two Properties of being *cool* and *moist*. Moreover, on these light Soils I have found *Chalks* and mellow *Clays* out of the Bottoms of Ponds to be excellent Superinductions, and fit to bring the hottest and lightest Sands to a proper Consistency for Flowers: But above all, where *Marle* can be had, that is of a Nature dissoluble, I have found *that* to be by much the best Ingredient to be mixt with light Soils for a *Flower-Garden*.

*Marle* is fat, cooling, and heavy, and if a third Part of it be mixt with two other thirds of light mellow *Untried Earth* there is (I think) no other artificial Compost of Earths and Dungs can *excel*, nay not *equal* it, in all its excellent Properties for accelerating the Growth of Flowers, and explaining their utmost Glory and Beauty; especially if some Pains be taken with the *Marle* to sift it fine, and mix it well with the Earth. Some have thought that for *Carnations*, and obtaining the largest Flowers, even the Soil taken out of the Bottom of Ditches, where Land-floods have driven the Earth in Heaps, is best: And this undoubtedly is very good, when it is discreetly chosen; because such *drift Earth* is many Times composed of some of the richest Ingredients and Soils that fall from the upper Grounds; which at last and at best are but an Imitation of what I have before directed; and yet you can never be sure of a due Quantity of your Ingredients thus found in Ditches, but that there may be yet too much of one and too little of another Sort: Whereas in the Case of *Untried Earth* and *Marle*, you make your Mixture to your Mind, of a due Proportion and proper Consistency. Two thirds of the *first* and one third of the *last*, I have found to be the properest Proportion if the *Untried Earth* be any thing light, and of a sandy Nature.

However, because many by their Experience have found other artificial Earths and Composts excellently to answer their Ends, and their Expectations, what I have said before is not spoken exclusively of other Ingredients, for the Purpose of most, much less of some particular Flowers. For the Bottoms of old Wood-Piles, well rotted Saw-Dust and Leaves; the Mould found in the Cavities of old Willow-Trees, rotted Thatch, rotted Cow-dung, Turf-ashes, Lime, and the Dung of Hogs and Poultry mellowed and sweetened by Age. These are all good and excellent, and very agreeable to most Flowers, if they are mixt with



with Discretion and Knowledge, *i.e.* if the *hot* and *light* Kinds are duly and proportionably mixt with the *heavy* and *cold*. Only I still add, that the Difficulty of mixing *these* rightly is greater and more hazardous than in the Case above: Though it ought to be taken notice of, that the Dung of Hogs and Cows alone well reduced to Mould, have done Wonders in explaining some Flowers.

Thus because it is impossible to lay down one general Rule for a Preparation of Soil, that may suit *all* Flowers, I shall think my self obliged to take Notice, as I go along, where any particular Composts or Mixtures will be necessary for the Benefit and Prosperity of such particular Flowers.

Whether the Flower-Garden is to be formed out of a natural Soil grown over with Turf or whether from confused Rubbish, or worn out Ground, it is necessary that it be frequently turned over during the whole Summer, that it may be perfectly cleaned from Stones, Roots and Weeds: For by thus turning and tumbling the Earth backward and forward, not only what grew upon the Surface will be destroy'd and mellow'd, but the Seeds of Weeds (some of which will lye ten or fifteen Years in the Earth, and afterwards grow) by being made to Vegetate and Sprout, when they are disturbed, will perish by the Heat of the Sun.

Thus the Soil being with Care and Diligence brought to a proper, clean, and mellow Condition, and the Superinductions rightly adjusted and mixed, the best Season and Time for putting it into a Figure and Form for Business, is about *Michaelmas*, and all the Month of *October*, which is the properest Time for *setting* bulbous Roots, such as *Ranunculus's* Emonies, Tulips, &c. and for *sowing* many sorts of Flower-Seeds, as will be observed hereafter. But although I have given a Specimen of a Figure for a Parterre, (and there are many other Varieties to please the Fancy) yet it may not be amiss to observe here, to direct the ingenious Florist in shaping his Earth in the Borders and Compartments, that the best and most graceful Figure for the Plain of the Earth, is the Shape of a *Carp's Back*, rising pretty much in the Middle, and so of Course sinking gradually to the Borders or Edgings. For by thus forming as it were, a sort of an *Arch*, it will set off the Plants it contains with an agreeable Beauty, and make the Flowers appear in every View much better and more graceful, than if they were set on a *Flat*.

I cannot but here repeat what I before hinted at; that it will by no Means be proper to plant or sow the tallest Race of Flowers in the Parterre, except it be of much larger Extent, than what I have before supposed; for Sun-Flowers, for Instance, Holly-hocks, white and Orange-Lillies, tho' proper in their Places, yet amongst *Reptiles* and the lower Race of some of the most beautiful Kinds do not *add to*, but *take away from* the Beauty of the whole, and exhibit to the Eye a confused Wood all on a Heap.

All *Reptiles* therefore and Flowers of the humbler Size should be set in Compartments by themselves judiciously sorted both as to their Kinds and Stature. Those that rise about a Foot high should be set in the Middle of the *Gibbous* Part of the Compartment; such as *Narcissus-Rockets*, &c. Those of six or eight Inches, as *Iris*, *Candia-Tufts*, *Sweet-Williams*, &c. in the next Order; and *Auricula's*, *Polianthus*, *Crocus*, and such kind of humble Flowers nearest the Edgings. And if this Gradation of Flowers were further so ordered as to answer the same Times of blowing, the Beauty would still be the prettier, more entire and uniform.

Thus it may be plainly seen what I aim at and would advise, *viz.* to keep a Wilderness out of the Flower-Garden, and to let the Wilderness of Flowers grow, where it may be a real Ornament in the Borders of the grand Squares, or Parterres, or under the North Walls at a great Distance, or in any by or angular Places. *Tulips*, *Ranunculus's* and *Emonies*, should by all Means have Places allotted for them by themselves; because their Varieties are great, and nothing else ought to interfere; because nothing else of the bulbous rooted Kinds can compare with their Beauty. Further,

*Water* being so very necessary for all Flowers, especially those that are new planted from *Layers*, *Slips*, or *Roots* parted, it may be thought proper that I should say something of the best Kinds. Well-Water or all such as are accounted *hard* are the worst. Running-Water is esteemed excellent, because being in continual Motion it subtilizes and warms itself, acquiring fertilizing Qualities from the terrestrial Matter mixt with it. Rain-Water hath wonderful Properties in Vegetation, from its having imbibed the nitrous Spirit of the Air. And as for *Pond* and *Standing-Waters*, they must be very proper for Plants, as being wonderfully repleted with terrestrial Matter, which alone is fit for the Formation and Augment of Flowers as well as Plants: But neither to *that* nor to *Water* is owing the Variety of Colours (as hath been vulgarly mistaken) but only to the Figure of their different Duels and Passages.



In short, the great Difficulty of all is to have a Command of Water of any Kind near the *Flower-Garden*: For the very *worst* may very easily be made *good*, if it be suffered to stand some Time in the *Sun* and *Air*; and more especially if Sheep's Dung, or Garden Mould be infused in it.

Before I conclude this Chapter I shall advertise the Reader, that in treating of *Flowers*, I shall use the same Method I did in treating of *Plants*; first, give a Table or Catalogue of all such kinds and sorts of Flowers as usually grow in our Island; and then particularly explain their Nature and direct the best Methods of cultivating and increasing them.

A complete Catalogue of F L O W E R S great and small, perannual or annual, usually known or propagated in *England*, either in the naked Ground or Hot-Bed.

Perannual F L O W E R S of the  
tallest Size.

*Campanula pyramidalis.*  
*Asters or Starworts.*  
*Holly-hocks.*  
*Perannual Sun-Flowers.*  
*Everlasting Pea.*  
*Canterbury Bells.*  
*Fox-Gloves.*  
*Lillies.*  
*Martagons.*  
*Mulleins.*  
*Primrose-Tree.*  
*Tuberoſe.*  
*Cardinal-Flower.*  
*Belvedere.*

Perannual F L O W E R S of the  
middle Size, whether from  
bulbous Roots or Off-sets.

*Moly.*  
*Asphodils.*  
*Piony.*  
*Julian.*  
*Narcissus or Daffodil.*  
*Fraxinelle.*  
*Valerian.*  
*Cyanus or Blue-bottle.*  
*Rose-Campion.*  
*Rocket.*  
*Monks-hood, aconite a violent*  
*Poison.*  
*Scarlet Lychnis.*  
*Sweet William.*  
*Crown Imperial.*  
*Acanthus.*  
*Carnation and Pink.*  
*Stock Gilliflower.*  
*Wall-Flower.*

*French Honyſuckle.*  
*Cardinal-Flower.*  
*Hyacinth.*  
*Collumbine.*  
*Iris.*  
*Corn-flag.*  
*Orchus.*  
*Frittilarie.*  
*Globe-Flower.*  
*Star-Flower.*  
*Geranium or Crane's-Bill.*  
*Anemone.*  
*Tulip.*  
*Ranunculus.*  
*Cyclamen.*  
*Hellebore.*  
*Lady's Slipper.*  
*Bacchus Bole.*  
*Jonquile.*  
*Basinet.*  
*Lillie of the Vale.*  
*Dog's Tooth.*  
*Spider Wort, or Bruno's Lilly.*  
*Batchellor's Button.*  
*Dittany.*  
*Pasque-Flower.*  
*Colchicum.*  
*Mandrake or Golden Mouse Ear.*

Reptiles of the lowest Vi-  
vacious F L O W E R S.

*Auricula.*  
*Polianthus.*  
*Dafie.*  
*Gentianella.*  
*Hepatica or Liverwort.*  
*Violet.*  
*Crocus, and Colchicum.*  
*Snow drop.*

*Indian Pink.*  
*Pansie aconite.*

Annual F L O W E R S from  
Seed.

*Sun-Flower.*  
*Snapdragon.*  
*Lark-Heels.*  
*Poppies Argemone.*  
*Candia-Tuft.*  
*Double Marigold.*  
*Venus Looking-Glass.*  
*Venus Navel-Wort.*  
*Parnassus.*  
*Muscipula or Catch-flie.*  
*Flos Adonis.*  
*Nigella.*  
*Lupines.*  
*Scarlet Beans.*  
*Annual Stocks.*  
*Viola Tricolor.*  
*Pheasant's Eye.*  
*Mallows.*  
*Scabious.*  
*Royal Comfrey.*

Annuals to be sown in Hot-  
Beds.

*French and African Marigolds.*  
*Amaranthus.*  
*Convolvulus.*  
*Marvel of Peru.*  
*Female Balsom.*  
*Sweet Sultan.*  
*Capsicum Indicum.*  
*Indian-Cress.*  
*Sensitive } Plant.*  
*Humble }*



## C H A P. III.

*Of perannual Flowers of the tallest Size.*

**I** Begin with the *Campanula Pyramidalis*. Of which there are two sorts, the *white* and the *blue*; the first is little accounted of; but the *blue* is greatly esteemed, not for its Flowers taken *singly*, but as making so handsome a Shew *altogether* with a Multitude of little blue Bell-flowers growing in a Pyramid, sometimes five or six Foot high; which Height makes it necessary to support the Stalks with Sticks. And when this Plant is set in a Pot supported with Sticks beautifully painted, it may become the Closet or the Chamber of the nicest Lady. They delight in a sandy Soil, and are sometimes raised from Seed sown in *September*, but most commonly they are raised from Slips parted from the Roots in *March*.

*Star-flower.*] The *Star-flower*, or *Asterwort*, by some called also *Oculus Christi*, bears its blue or purple Flowers in *October*, on several Stalks of about three Foot high, and not exceeded by many in Beauty. There is another sort which bears also purple Flowers in *August*, but not so tall as the other. Besides which, there are also great Varieties of less account. But it may not be improper to mention the *Arabian Star-flower*, which discovers its Beauty in *May*; the *Naples* sort, the *Star of Bethlehem*, both *yellow* and *white*, which flower in *April*. These are hardy Plants, and may be multiplied by Seed, but best by the Roots parted in Spring, every one of which will quickly grow and bear Flowers the same Year, in almost any Soil and Exposition.

*Hollyhocks.*] *Hollyhocks* are very aspiring Flowers, rising often with several Stalks more than seven or eight Foot high; and therefore proper Places against Walls or the Corners of Gardens should be assigned them, where they may explain their Beauty to distant Views; for the several sorts of them bear Flowers of almost all Colours: And those which are double make a beautiful Shew in Autumn. The double ones bear Seeds and from them they should be raised; and they will bear the second Year; but they may be also raised from Off-sets, which is the surest Way to continue or encrease the sort. *March* is the Month for both Methods.

*Sun-flower.*] The *Sun-flower* or *Heliotrope* is of two sorts. The first here ranked among the *perannuals* is that which springs from the Root every Year, and arises from many Stems, making a goodly Shew with a Multitude of yellow Flowers, which because they are apt to turn to the Sun, have acquired the Name of *Heliotropes*; but this properly is yet no more than what most other large Flowers growing tall, have. These are so large and spreading, that they hardly find Admittance in small Gardens; but in large ones they are very great Ornaments artfully placed at proper Distances: But neither are these so large as those of the annual sort raised from Seed sown in *March*, which will often grow eight or nine Foot high, with many Branches laden with large yellow Flowers a Foot diameter. These die and must be sown every Year, but with Caution too; for they have matted Roots, and do much *beggar* the Ground. The Seed of these affording a good Quantity of Oil, tempted some Time since a Projector to sow a whole Field, in hopes of Riches from the Oil: But he soon repented his Experiment, when he found he had almost spoil'd his Land.

*Everlasting Pea.*] The *Everlasting Pea* is raised from Seed sown in *March*; for it hath a Root like a Carrot, and bears transplanting very ill. It blossoms not till the second Year after sowing; but then it continues its Peach-Bloom Blossoms for above two Months; and if the Plant is supported either by Hedge or Tree, it will grow eight or nine Foot high. It is thought by some, that if the Blossoms are steep'd in Spirit of Wine, a fine blue may be produced, not much inferior to the *Ultramarine*.

*Canterbury Bells.*] The *Canterbury Bells* differ from the *Campanula Pyramidalis* in not growing so tall, and having their Flowers of a deeper blue. They have rough Leaves like a Nettle, and square Stalks on which the Flowers grow. There are three or four sorts of these cultivated in Gardens; one of which bears a double Flower, but every Way else like the common sort. There is another sort which has a Root like a Rampion, creeping under the Surface of the Earth, and thereby encreases very much; and this is by some called the Peach-leaved Bell-flower, from the Resemblance its Leaves have to those of the Peach-Tree. Another sort bears white Flowers.

*Fox-Gloves.*]



*Fox-Gloves.*] The *Fox-Glove* is a very tall Plant, rising with its Stalk two or three Foot high, and sometimes more, and therefore should be placed in the Borders of a Parterre that is full of the larger sort of Flowers. This being of the vivacious Kind, may be raised by Roots, as well as multiplied by Seed; and the best Time of doing both is in *September*. Some reckon up three or four sorts of *Fox-Gloves*, but there are only three sorts cultivated by Gardeners: The tallest sort is the *Iron coloured*, and the other two are also distinguished by the Colours of their Flowers, viz. the *purple* and the *white*. To make the most agreeable Shew, their Stalks should be ty'd up to a Stick, and not crowded too near one another. They delight in the Shade, and thrive best in a loamy Soil.

*Lillies.*] The *Lilly* by its Name distinguisheth itself from those that are less valuable. It is ever mentioned with Esteem by the Antients; and both sacred and profane Authors, when they would make any Thing appear glorious, or make a most beautiful Comparison, are wont to introduce the *Lilly*. But of these there are several Sorts, some more, some less beautiful, according to Persons different Fancies. The *Orange Lilly*, the *white Lilly*, the *double blossom'd white Lilly*, the *strip'd leav'd Lilly*, and another Kind; which produces Bulbs upon its Flower-stalks, are the chief of this Kind deserving Care and Cultivation. It hath not hitherto been made certain that any of the Lillies have brought their Seed to any Perfection, the Flower always falling without leaving any Fruit behind it. So that the readiest Way to encrease this Flower, is by Off-sets from the Roots, which are wont to encrease and multiply very much; and these may be taken up and planted again any Time, from *August* till the latter End of *October*.

To change the Colour of the Lilly, and to have it of a purple Hue, whilst it blossoms, some curious Persons recommend the following Method. Take ten or a dozen of the Stems; tie them close together, and hang them over a Chimney, where they will put forth small Roots like a Bulb or Shallot on their Stems; and when the Time comes to plant, let the Branches be well steep'd in the Lees of Claret until they become very red and tinged. Then plant them in this State, and pouring a large Quantity of the same Lees upon them, the Lillies that will be produced, will bear a Flower of a purple Colour. But *quære*.

*Martagons.*] The *Martagon* is indeed but another sort of *Lilly*, whose Leaves turn inward, and grow crooked, and is for that Reason called *Lilium intortum*. There are several sorts of them differing in little else beside the Colour of their Flowers, and all of them have this Property in common, that they shoot forth a great Number of Roots, by which they are so multiplied in *October*. This is also to be planted among Flowers of the largest Size, or rather at due Distances in the Middle of Borders, among Flowers of a less Size.

*Mulleins.*] There are divers sorts of *Mulleins* bearing Flowers of different Colours, viz. *brown*, *black*, *white*, *red*, *green*, *purple* and *yellow*. This Plant is apt to gather a Multitude of Moths about it, from whence it is by some called *Moth Mullein*, and it seldom blossoms lower than four Foot, and often six Foot from the Ground; and although they are most of them wild Plants, yet the beautiful Spikes of Flowers they throw out, recommend them to the Esteem of the Florist, who thinks them proper Companions with many others of taller Race. They love a sandy Soil and the Shade, are to be multiplied by Seed sown in Autumn or *March*, and will blossom the second Year after sowing.

*Primrose-Tree.*] The *Primrose-Tree* obtains its Name from the Resemblance the Blossoms have to the common *Primrose* in Shape, Colour and Smell. It rises near three Foot high, will grow in any Soil, is to be raised from Seed sown in natural Ground in the Spring in Nurseries, and from thence should be removed in proper Places in Autumn; for they blossom not till the second Year. They flower in *June*, and the Seed is ripe in *August*.

*Tuberoſe.*] The *Tuberoſe* is a sort of *Lilly* or *Hyacinth*, rising three or four Foot high, and about the Bigness of one's little Finger. On the top of this Stem grow several Flowers ripening one after another like those of the *white Lilly*, but vastly better scented, and of an higher Perfume. Although this curious Flower is a Native of *Italy* and the Southern Parts of *France*; yet it is now become very common in *England*, especially since the Roots are brought yearly to us from those Parts at very moderate Rates. The *English* Roots and Off-sets will indeed be brought to flower with Care; but then their Stems are never so big as those that are brought to us from abroad, nor are the Flowers so large, numerous, and beautiful.

Having therefore fixed upon some large and sound Roots, about the beginning of *February*, a Pot with rich and well prepared Earth should be allotted to each Root, which should be only just covered at first, and no Water given to it; but let the Pot be set



up to the Neck in a Hot-Bed discharged of its greatest Heat, and then either covered with Frames or Bell-Glasses; for the least Frost destroys them when they first begin to spindle.

After they have shot three or four Inches, you may begin to give them some Water, a little at a Time, for too much Wet rots them. And then about the Middle of *April*, the Pots may be removed from the Hot-Bed, and either set in South Windows within Doors, or against a warm Wall with Bell-Glasses over them till the Middle of *May*, when they will be able to shift for themselves, with no other Care but a warm and sheltered Situation, and a little Pond-Water every Day about Noon.

When they begin to spindle, and the Flowers Buds shew themselves, they must be supported with handlome taper Sticks; which if they are painted yellow, and blue on the Top will add some Lustre to the Flower, whose Excellence consists chiefly in its odorous Perfume. What is something particular in the *Tuberoſe* is, that the Flowers blow successively one after another, by which Means it continues a long Time in Bloom, especially if it is kept within Doors, as it ought; for then the whole Room will be perfumed with the Odour of the Flowers.

*Cardinal-Flower.*] The *Cardinal-Flower* was brought into *England* from the *West Indies*, and is much esteemed amongst the Florists. There are two sorts of them, the one blossoms about two Foot high, and bears Flowers of a pale blue, the other bears very beautiful Flowers of a Crimson Colour on slender Stalks three Foot high. They may be raised from the Seed sown in a Hot-Bed; but the best Way of encreasing them is from the Root, by planting them in *April* in Places well exposed to the Sun. They begin to blossom the Beginning of *August*, and continue their Beauty near two Months.

*Belvedere.*] The *Belvedere* is one of the taller sort of Perennials, rising in several Stems three or four Foot high. However, though it will bear the Winter, and may be removed in the Spring, it is best to raise it from Seed sown in the Spring; for the Root of this Plant is very sensible of the Air, and will dye if it be not immediately planted and watered as soon as it is taken up. This, and indeed all the preceding sorts of Flowers are fittest for the large and spacious Borders.

*Comfry.*] *Royal Comfry* is of a beautiful Green, and bears several Flowers falling down like Cat's Tails, resembling on one Side the *Lark-beel*, and of a deep Red. It is multiply'd by dividing the Roots in Spring, and setting it either in a Pot or some sheltered Place; for the Cold much affects it. It is esteemed a good Ornament to Borders, whether set among Flowers of a larger or smaller Size.



## C H A P. IV.

### *Perennial Flowers of the middle Size, whether from Bulbous Roots or Off-sets.*

*Moly.*] **T**HE *Moly* is called by some the *Wild Garlick*; of which there are great Varieties: viz. *Homer's Moly*, who gave the first Name to it; the *Hungarian Moly*, the *Indian Moly*, the *Serpent's Moly*, the *yellow Moly*, the *purple Moly* and the *Silver Moly*, besides the *Moly of Montpellier*, which flowers late in *September*: For all the rest flower from *May* to *July*, making a very agreeable Figure in a Flower-Garden, either in the naked Ground or in Pots. They ordinarily shoot forth Stems a Yard high, on the Top of which appear Flowers of several Colours before mentioned, whose Leaves fall down like the Tops of Fennel. It thrives in any Soil, and is to be propagated from its Bulbs either in Autumn or Spring.

*Asphodils.*] The *Asphodil* is by some called the *King's-Spear*, because whilst in flower, it looks like a Scepter. There are two sorts of it, little differing from one another, save that the one branches out much more than the other. It is better multiply'd by the Roots than by the Seed, and it deserves a Place amongst the larger Flowers in the open Borders or Parterre.

*Piony.*] The two Sorts of *Pionies* are distinguished by their Sexes. The *Male Piony* bears a Flower on the top of a Stem about three Foot high in the Shape and Colour of

E c c e

a red



a red Rose, but much bigger and more double. The *Female* differs not much from the *Male*, only the Flowers are not so large. They commonly flower in *May*, and endure long in the Ground without much Care or Art; and, which is its Excellence, it thrives best where tenderer Plants will not live; in the Shade, and where it is least exposed to the Sun. It is propagated by separating the Roots in Autumn or Spring.

*Julian.*] The *Julian* shoots out several hairy Stalks and pointed green Leaves, which are garnished with white Flowers of a very pleasant Smell. It may be multiply'd by the Seed sown in *October*, or early in the Spring; but then many Flowers must not be expected the first Year: But from Slips and rooted Plants you may expect Flowers the same Year, which are sometimes diversified with purple and white. This Plant is supposed to be good infused in Drink for the Scurvy, for inveterate Coughs, for Asthma's and in Convulsions; for its Property is to provoke Sweating. It is not uncommon to find this Flower grow wild in Hedges.

*Narcissus* or *Daffodil.*] Of the *Narcissus* there are great Varieties brought amongst us by curious Florists of different Colours and Shapes. Some are *single*, some *double*; some *white*, some *yellow*; some *large*, and some *small*; and amongst these, some are *earlier* and some *later*. On which Account there is of Necessity required some different Management and Culture.

The *Italian Narcissus* has a yellow Cup and white Flower, and should be planted in light Earth. The *Narcissus of Constantinople* is observed to shoot forth twelve Flowers with white Leaves at the top of its Stalk, having other smaller Flowers of a yellow Colour in the middle. The Beauty of this Colour is very great, but it should have some Assistance to make it open and explain itself well. For which Purpose the *Tunicle* which contains the Flower should be dextrously slip'd with a Penknife, that the Flower may make its Way the sooner; otherwise it would be in Danger of being suffocated by its Membranes, which are apt to keep it as in a Prison. These are thought best to be removed every Year, and carried to some very dry Place, otherwise were they to be left in the Ground, they would throw out so many Suckers as would weaken them, and prevent their blowing.

There is a *yellow pale Narcissus*, whose Leaves are commonly parted and curled, which is supposed to do better in Pots than in the open Ground, though it requires a lean Earth and a Degree of Shade to bring it to its greatest Perfection.

The *White Autumnal Narcissus* requires also a lean Earth and little Sun, and may be planted two Inches asunder.

The *Spanish Narcissus* is both double and single, and requires the same Soil and Culture with the *yellow* sort.

The *long* or (as it is called) *Camel neck'd Narcissus* thrives best in a rich Soil, not too much exposed to the Sun, because it is most beautiful when it blows *late*. These should all be removed at least once in three Years.

It would be almost endless to mention all the various sorts of *Narcissus*, which the Curious have of late discovered or described: But it would be the highest Injustice to the Crown and Glory, and King of them all, to say nothing, or but little of the *Narcissus of Japan*, which is by all allowed to have the Precedence and to excel in Beauty.

It is not above half a Century since this delicate Plant was brought over to us from the *Indies*, when it was first called the *Japan Lilly*: But afterwards as the Merchants trading from thence, and unloading at the Island of *Guernsey* the Ballast, in which lay accidentally and confusedly many of these Roots, they soon became plentiful there, and obtained the Name of the *Guernsey Lilly*, from whence at this Time we have them brought to us into *England*; the Want of which Knowledge hath occasioned our modern Authors writing about Flowers to speak of this and the *Narcissus of Japan* as two different Flowers: There are indeed two or three Kinds of these something differing from one another, and the greatest Difference is in one which flowers the Beginning of *June*; but they have been all brought from *Japan* to *Guernsey*, and from thence are derived to us. The two other sorts which flower in *October* and *November*, are also very choice and beautiful Flowers in the Form of a Lilly of a Crimson and White Colour. The Cover wherein the Flower is inclosed is composed of white Membranes, which at their first opening discover the Flower-Leaves of a Pink Colour, representing a Bunch of Feathers both in the inner and outward Side six unequal Pivots shoot out from the midst of these Flowers, on the Top of which some *Stamina* appear like those of *Saffron* falling down like the Tops of *Fennel* of a beautiful and agreeable red. The whole Flower looks as if it was powdered with Gold-dust, the Ground of the Petals being of a Rose Colour.



Two thirds of Sea-Sand and one third of Garden-Mould seems best to imitate the Nature of the Soil from whence they come, and they are observed to thrive in such. They will bear our Winters under a good South Aspect; for they delight in a hot Sun. The want of which is oftentimes the Occasion they will not blow with us; but to make sure of that, the only Way is to give such as are in Pots the Advantage of a gentle Hot-Bed in *August*. The Off-sets should be removed once in two or three Years, and even *they* will soon with Care be brought to bear.

*Fraxinelle.*] *Fraxinelle* or *bastard Dittany* shoots out Leaves like those of the *Ash*, tho' smaller; is a hardy Plant, every Year shooting from its Root, Stalks about two Foot high, on which are discovered Flowers not unpleasant about Midsummer, and it is propagated by Plants or Seeds.

*Valerian.*] Of the *Valerian* there are observed chiefly three sorts of different Colours, esteemed chiefly for their fragrant Smell. One is distinguished by the Name of *Dodonæus* or *red Valerian*. Another is called the *Garden* or *white Valerian*; both from the Colour of their Flowers on the Top of their Stems, and the third is called the *Greek Valerian*, and bears Flowers of a pale blue Colour on the Top of its Stalk; and this sort hath sometimes variegated Leaves. These are all of them apt enough to sow themselves from their Seed-Vessels, and may be encreased by Off-sets. They blossom in *May* and *June*.

*Cyanus.*] The original sort of *Cyanus* or *Blue-bottle* is wont to grow plentifully amongst Wheat: But yet there are two or three Kinds of them, which Gardeners think worth their while to encourage and propagate; viz. the *great Cyanus*, and the *Cyanus of Constantinople*. This Flower will grow almost any where, and in any Soil; but the more Care and the better Soil it hath, the fairer will the double Flowers be, which are of a light blue Colour, which being the least frequent amongst Flowers, is the more to be valued and encouraged. It may be raised from Off-sets in *March*, or from Seed sown in Autumn with a View of transplanting them in Spring.

*Rose Campion.*] The *Rose Campion* that hath a single Flower is not so valuable as the double one, which is either *red* or *red and white motled*. If you raise it from the Seed, it must be from the single one; for the other bears none, but it may be raised from Slips set in *March* in the Shade. It is a pretty beautiful Flower; for the *red* is very dazzling, and the *red and white* is no disagreeable Mixture. Its Stem is about a Foot high, and it blows about Midsummer.

*Rocket.*] The *single flowering Rocket* is of little esteem; but the *double flowering white*, and the *double flesh coloured* are pretty Ornaments in the Flower-Garden, equalling and resembling in Beauty the *double white stock Gilliflower*. They are apt to kill themselves with bearing too many Flowers; and therefore too many Stalks should not be suffered; but some of their Heads should be cut off before they flower, which is commonly in *May*. They are encreased by Slips taken from about the Roots and planted in *March*, and the same Year will blow on Stalks about a Foot high.

*Monks-Hood.*] This is a Plant that is raised with little Care: The Seeds thereof are large, and should be sown in *March* under some Wall or against a Trellis or Arbour, where it will rise three or four Foot high. Mr. *Chomel* and *Liger* ascribes a Property to this Flower which has never been known or observed in *England*, viz. *that it fastens itself to every thing it lays hold on like Pease*; but I could never observe that it has any *Tendrils*, but grows upright with a sufficient Strength of its own. It derives its Name from the Resemblance the Flower bears to the Hood of a Monk, having its *Valves* and *Tip* behind. Its Flowers are of a beautiful deep Blue, and a very uncommon Form; but I cannot understand why Mr. *Bradley* saith this Flower is rarely found in the Gardens about *London*, for it is one of the most common Ornaments, I think, in *all* Gardens. But he doth right to lay in a Caution against its poisonous Nature, for I have sometimes trembled to see Dishes garnished with its Leaves and Flowers, which appear in *May* and *June*. It may also be propagated by parting the Roots.

*Scarlet Lychnis.*] The *Scarlet Lychnis*, called also Flower of *Constantinople* and Flower of *Bristol* is a Plant well known and admired for its Beauty. The *single* as well as the *double* sort strike the Eye with its pleasant scarlet Flowers, which appear in their Glory in *June* and *July* on Stalks three Foot high sometimes. The double sort especially is sometimes graced with a Pot, or else is set in the nicest Quarters of the Flower-Garden amongst the taller Beauties. They love a light and rich Soil, may be encreased by slipping the Root in *March*, or from Seeds of the single sort sown in Autumn.

*Sweet-William.*] There are two or three sorts of this pretty Flower; and indeed the sorts are almost infinite, if you nicely observe the Diversity of Stripes and Colours, and the Sportings of Nature even in Flowers on the same Stalk, there being hardly to be found



found two exactly of the same sorts, except they prove (as they do some times) *Self-coloured*. The Flowers view'd singly are but small, and yet it is observed, that no Flower of its Bigness can shew more Beauty within so small a Compass. The single ones differ only in the Colour of their Flowers; some are *red and white* prettily intermixt; others are mixt with a *deep Crimson*, and bear their Blossoms about *Midsummer*, and from their Seeds great Varieties have been raised. There is also a *double* flowering Kind of a beautiful *red*; but this having no Seed, must be raised from Slips in the Spring, and planted in an Earth not too light.

*Crown Imperial.*] The *Crown Imperial* is by the Vulgar called *Crown and Pearl*, by Way of Corruption of the Word; but they found by reason of that Name on the Discovery of many round Globes at the Bottom of the Flower like so many *Pearls*: It is one of the largest Kind that blows so early in the Spring as *March*. The common bears a *single* Row of yellow Flowers; but the *double* is that which is most esteemed, the Flowers whereof are disposed in the Form of a Crown, and appear like a Lilly of six Leaves. One sort of this Flower is found with variegated Leaves, green and white, which (when they are set in Rows) make a very agreeable Shew in the Spring. They are propagated either by its bulbous Roots and Off-sets removed at *Midsummer*, or (which is the furthest Way about) by the Seed sown in Autumn.

*Acanthus.*] By the Authority of Mr. Bradley I insert *Acanthus* here, having never seen it my self. He saith indeed it is very rarely found in the Gardens about *London*, tho' it is a great Curiosity and of easy Culture. The Flowers appear in *June* upon Stalks of about two Foot high, shaped like the Blossoms of the Fox-Glove, and are of a *Peach-bloom* Colour. The Leaves of this Plant it seems are not without Beauty, full of Thorns like Thistles and prettily variegated. The Seeds must be sown in *March*, but will not blossom till the second or third Year. They love the Shade and a sandy Soil.

*Carnation.*] Whether we consider the *Carnation* with respect to the Duration and Continuance of its blowing, the almost numberless Varieties it affords, the surprizing Mixture of Colours in many of them, and the surpassing Beauty and Excellence of some choice ones every Year of late introduced amongst us, and the agreeable Scent in them all; if the *Vine* may be said to be the *King* of Fruits; the *Carnation* must be allowed to have the Precedence here and to be the *Queen* of Flowers.

There are some general Classes, under which Gardeners commonly range them, which for Distinction Sake I shall here mention, *viz.* the *Picketees*, *Painted Ladies*, *Beazarts*, *Flakes*, and *Flames*; the general Characters of which are thus: The Flowers of the *Picketees* are of a *white* Ground spotted with *red* or *purple*. The *Painted Ladies* have their Petals dyed on the Upper Side either with *red* or *purple*, and the nether Side of their Flower-Leaves is *plain white*. The Flowers of the *Beazarts* are variegated with four distinct Colours; the *Flakes* are of two Colours only, and those always strip'd. And the *Flames* have a red or flame-coloured Ground, strip'd with *black* or *purple*, or some very dark Colour.

But forasmuch as there are vast Varieties in all these several sorts of Tribes or Classes (the *Picketees* especially) every one complimented with Titles of Honour and Distinction. And because Names are precarious and arbitrary Things, carrying no certain Mark of Difference, I shall not enter into those Particularities, but chuse rather to say something about their general Culture and Management.

Every one knows that a *Carnation*, and every distinct sort of it, is best and surest propagated from *Layers*; that is to say, from collateral Branches proceeding from the Mother-Root, and not spindling into a Flower. These Branches slit from the Middle of the first Joint nearest the Root upward, and left with a Lip, and afterwards peg'd down into fine Mould, will easily, in about a Month or six Weeks, strike Root from the Lip. If this Operation (which is easy and familiar; *I will not say, to the Ladies*) be performed in *June* or *July*, the Flower may be taken from the Mother-Root with Safety before Winter, and set in a prepared Bed; or if it stand in its Place till Spring, it may then be removed into a Place where it is wanted; for I need not say that the best sorts deserve each one a Pot, which being to be moved, either within or without Doors, is often the Occasion of the Preservation of some of the choicest and tenderest sorts.

Every one also knows that our best *Carnations* (or *Gilliflowers* or *July-flowers*, for so they are also called) are raised from *Seed* sown in skreen'd untried Earth, taken from some of the best Flowers; and the best Time wherein to do this is *April*. I am aware that Florists have every one their *Nosstrum* of prepar'd Earth for the Seeds of these Flowers: But if Discretion do but guide the Florist with a View of chusing such untried Earth out of Meadows as is of a *holding* Nature and rich, I am sure he cannot err. Pots are too

little



little; I should rather advise to sow the Seed in large square Boxes set up to the Brim in the Earth under some well sheltered South Wall. The next Year they may be removed, and the Year after may give you Hopes of seeing some new Varieties.

I am not sufficiently satisfied about the new System of the Generation of Plants from Impregnation, as first communicated to the Royal Society by Mr. *S. Moreland*; and afterwards explained by Mr. *Balle* and Mr. *Bradley*. The System is pretty and rational: There wants farther Experience, and some Objections to be removed before a Man not over-hasty can give into it. It is however upon the Foot of this Conjecture, that Mr. *Bradley* adviseth the curious Florist, to plant of every good sort of his double Carnations in Beds, on a Line in the Middle, and on each Side of them, to set at least two Rows of single ones of choice Colours, and among them some Plants of the *Sweet-William* and of the *Indian-Pink*, which have such Varieties of odd Colours in them. The *China-Pinks* and the *Sweet-Williams* bearing single Flowers as well as the single Carnations, may have Opportunity of communicating their *Farinam* into the Cells of the double ones, and set their Seeds; which if they do, we shall not only gather a larger Quantity than we could otherwise expect, but likewise be assured of great Varieties from them. Doubtless Mr. *Bradley* having since this first Conjecture, had many Years wherein to try his Experiments, and to improve Vegetables, will quickly give us a History of his Success, and a Catalogue of new Fruits as well as new Flowers.

In the mean Time we must be contented with the old Way of trying our Fortune, by sowing the best Seeds on the properest Soils we can get; and to nourish and explain the Flowers obtained, either from the *Seed* or by *Layers*, by such suitable Mixtures of Earths as have been found best to answer the Expectations of the Curious.

It is by no Means so difficult to explain well the several Stripes of the smaller *Picketees*, and *Painted-Ladies*, as it is to explain fully and largely the Flowers of the biggest Size, which is at present the great Emulation that Florists are got into. It is not so much how good, but how big is your Flower? Not but that all are agreed to commend the *Bonum Magnum*, and to extol them if they are good and great too. The great Mystery of obtaining the End of a large-sized Flower, I take to be in the *Soil*, the *Situation*, and *seasonable Wat'rings*.

The proper *Soil* for a good and large Flower should be betwixt the two Extremes of Clay and Sand, that is, of a loamy Nature, and yet most artificial Earths are too dry, and too rich. Some I have known that have had great Success by taking out of Ditches such drift Earth and Sand as have been washed by Rains off the neighbouring Fields; and with this alone have done Wonders. They who had rather try Mixtures, must be sure to have all their Dungs well rotted and mellowed by Time, and to remember that too great Riches is as bad as Poverty. After these Hints about Soils, I may well enough leave the ingenious Florist to his own Discretion.

The *Situation* for a Flower in the Winter and Spring cannot be too hot: But after the Equinox is past, I should rather choose to let the Carnations in Pots to have only the Benefit of the Morning Sun till Noon, and be as little exposed to the merciless Winds as possible.

*Seasonable Wat'rings* (especially for such as are in Pots) is the last Thing to be carefully minded; and too much here is also as bad as too little. But as Pots are on every Side surrounded either by the Sun or hot Air, whereby the Earth within is quickly deprived of its Moisture, therefore proper Seasons must be watched to give them the Supply wanted; which is best done by Water impregnated with Sheep or Deer's Dung. After which it is a very right Practice of some to lay short green Grass on the Surface of the Pot round about the Flower, to keep the Sun from exhaling too soon the Moisture.

It seems hardly needful to say, that if a Flower be expected to blow very large, no more than one Stem with its Flower should be suffered to remain; because Reason teaches, that one will be better fed and nourished from the Root, than many; and this one must be well supported by a stick. About ten Days before the Flowers open themselves, all the round podded Kinds (which are indeed the largest) will begin to crack their Husks on one Side or other; and then it is that the diligent Hand of the careful Florist is expected: For with a Glover's Needle he should now split or open the Husk on the opposite Side to the natural Fraction, and about three or four Days before the complete opening of the Flower, must cut off with a Pair of sharp Scissars the Points on the Top of the Flower-pod, and supply the Vacancies or the Openings on each Side, with two small Pieces of Vellum or Oil-Cloth, which he may easily slip in between the Flower-Leaves and the inside of the Husk; by which Means the Blossom will display its Parts equally on all Sides, and be of a regular Figure.



Some have contrived to supply the Defect of bursting Flowers, by applying a Piece of Gold-Beater's Skin to the Outside, which if it goes quite round, and laps a little over, will confine the Flower within its proper Bounds, and yet give it Leave to explain itself; especially if the Extremities of the Husks be cut off with a Pair of Scissars.

*Pink.*] The *Pink* being so near a-kin to the *Carnation*, it is necessary that I say something of it in this Place. It hath great Varieties, and is chiefly propagated for Borders in large Gardens. Some are very double, and strip'd with pretty Eyes of several Colours; others are single and strip'd with good Eyes: They are easily propagated both from the Seed and the Roots, which may be parted in the Spring; but from the Seed are every Day produced new Flowers, which are hardier and kept with less Care than the *Carnations*: But *both* are subject to be destroy'd by Ear-wigs, which may be catch'd in Hoofs of Animals put on the Tops of Sticks. The *German* and *Poets Pinks* are both highly esteemed, and deserve the Care of the Florist; the *first* for its flaming red Colour, and the *other* for its deeper red, which is sometimes mixt with white. These are also raised from Seed and Slips.

*Stock-Gilliflower.*] The excellent Property of the *Stock-Gilliflower* is; that with Care it may be made to blow almost all the Year; and a more fragrant and delightful Scent hardly any Flower affords; it is apt to be much hurt, and often killed by the severe Frosts of the Winter: To prevent which, the best Way is not to sow them till after *Midsummer*; for the bigger the Plant is, the lesser it will endure the Winter. After they are two or three Inches high, they should be removed at six Inches asunder, under a South Wall, and there abide till the Beginning of *April*, and then they may safely be removed to the Places where Beauty and Fragrancy are expected.

There are several Kinds of this pretty Flower. Some, and indeed the most, are single; some *crimson*, some *white*, some *purple*, some *red*, and some strip'd with *white*; and from these (especially such as have six or seven Leaves) are derived by the Seed, all the several double and strip'd ones of the aforesaid Colours; for the double ones bear no Seed. Of all others the red *Brompton Stock*, when it comes double, especially if double and strip'd, is esteemed the greatest Beauty. I once accidentally met with in my own Garden a sort with most beautiful strip'd Leaves, of the purple Flower, which liv'd with me a Year in its Glory; but being weaker than the other sorts, the next Winter took it off; and I have never met with another since. The *yellow Stock* is a pretey great Rarity, but there are of them both single and double. But when the double ones of all the best Kinds are obtained, the surest Way to preserve the Kind, is to *slip* them; *i. e.* to take such Slips from the Side of the Plant as do not put forth Flowers; then slit the Bark at the lower End in four Places, raising it up a little with the Point of a Knife, and so set it in light Mould in the Shade, watering it as Occasion serves.

This Plant seldom continues more than two or three Years; and the more it blows the sooner it dies. Even the first Year of blowing, if it continues to flower late, it will go near to die, except the Winter be very favourable; to prevent which, therefore the best Way is to *head* it, that it may in *Autumn* put forth new Shoots for flowering the next *Summer*. The *Brompton* large Kind is the hardest to be preserved, especially the double sort, for that it quickly bears itself to Death.

Mr *Bradley's* Advice of *Inarching* the double and single *Stock-Gilliflower* on the *Wall-flower* might easily be try'd, and may probably enough succeed as to Growth; but neither the Colour nor the Duration of the Flower can well be expected to be altered. However it is good to try, that we may know every Power of Nature.

I cannot forbear mentioning the Difficulties I laboured under at *Yelvertoft*, where I seldom or never could winter the double *Bromfield Stock* by the reason of the Coldness of the Soil and Climate, *Lat.* 52° 30' And yet ever since I came into the *Bishoprick of Durham*, no Winter hath hardly hurt them; but the Warmness of the Soil hath preserved them, and they blow early in the Spring with Strength and Vigour, *Lat.* 55°. Without any Regard to the Age of the Moon, it is good to sow the Seed at three or four several Seasons, and the older the Seed is the better, if it will but grow; after three Years it commonly perishes in the Ground.

*Wall-flower.*] The *Wall-flower* is so near a-kin to the *Stock-Gilliflower* that little further need be added to direct its Cultivation; for what regards the one, serves the other, save that the *Wall-flower* is much the hardier Plant, and of longer Continuance. There are several sorts found in the Gardens of the Curious, besides the common *yellow* single sort, which chuses to grow in Clefts of Walls and other dry Places, from whence it takes its Name. For the *double yellow* is still better than the *single*; and the rarer sorts still are, the *double yellow* with variegated Leaves, the *double white*, the *bloody Warrior*, whole



whose Flowers are *yellow* tinged with *red*, and another single one, variegated with *yellow* and *brown*. They all blossom much about the same Time, *viz.* the three Spring Months. All the single sorts propagate themselves fast enough from Seed, and the double ones are easily encreased from Slips well watered. With Respect to this as well as the *Stock-Gilliflower*, it is good to change the Seed with some Friend at a Distance, whose Soil is different; for the *same* Seed in the *same* Soil repeated, commonly degenerates.

*French Honyfuckle.*] The *French Honyfuckle* bears Spikes of purple or yellow Flowers; blossoms above a Foot high, and make a goodly Shew. It is commonly raised from Seed in the Spring, but will not blow till the second or third Year. 'Tis an hardy Plant and will live several Years.

*Cardinal-Flower.*] The *Cardinal-Flower* is a Plant which hath large Leaves, whence arise tall Stalks growing smaller upwards, on the Top of which there are Flowers of five Leaves. There are two sorts of them brought to us from the *West Indies*. The one blows near three Foot high most beautiful Flowers of a Ruby colour, the only two Foot high bears Pink coloured Flowers, both blossoming all *August* and *September*. The Seed is very small, and should be sown on the Surface of fine Earth in a Hot-Bed, beaten down with the back of a Trowel. The Curious compliment this Flower with a Pot, to shelter it in the Winter from severe Frosts. It may also be encreased in *April* by parting the Roots; or in rainy Weather in *August*.

*Hyacinth.*] The *Hyacinth* or *Jacinth* is of divers sorts, some of which are but of little esteem, and therefore I shall mention only some of those most regarded, which are as follow. The *party coloured*, the *Ash coloured*, *Calcedonian* or *Turkey Hyacinth*; the *blue Rosemary coloured*; the *Oriental*, the *Polyanthus*, the *Starry Hyacinth of Peru*, the *Grape-flowered*, the *red*, the *rose*, the *violet*; the *Spanish* and *Szenica Hyacinths*. These have also great Varieties of Colours, and some double and some single.

These bear well enough our Winters; and all of them, except the *Peruvian Hyacinth*, blow pretty early in the Spring, and are well scented. They may be either raised from Seeds or planted from Off-sets in Autumn. The Bulbs that are produced from Seeds do not bear Flowers till the third Year; nor do they always come up of the same Colour with those from whence the Seed was taken. So that the best Way to be sure of your sorts is to plant from the Bulbs or Off-sets. Most *Hyacinths* delight in a hot Exposition, and a light warm Earth; and should stand four Years in the Place without being transplanted.

*Collumbine.*] The *Collumbine* is a Flower that may be either raised from the Seed or removed from Place to Place, for it will continue several Years. The Seed sown in *April*, will bear Flowers the second Year: There are several sorts of this Flower, with respect both to their Form and Colour. The single ones of any Colour are not much regarded; but the *double ones* (which also bear Seed) should be carefully preserved, by rooting out the *single ones* whenever they are discovered. Some of these *double ones* are also prettily variegated, sometimes partly *red*, partly *blue* or *purple*, partly *crimson*, partly *cheesnut*, and partly *white*. The Roots will continue three or four Years; but like most other Flowers, they are apt to degenerate unless the Seed be changed. For want of an opportunity of doing this, I my self outlived the best Collection of *Collumbines* I ever saw, whilst in *Northamptonshire*.

*Iris.*] The *Iris* or *Flower-de-Luce*, is of an antient Family and a numerous Tribe, is both of the bulbous and tuberous Kind, and is therefore best propagated from thence, though it may also be raised from the Seed in Autumn. There are some of them of the tuberous rooted Kind, which encrease exceedingly in good Ground. These are propagated as the former, and are to be taken out of the Ground when the Leaves begin to dry; and after they have been kept some Time in the House, are to be replanted in *September* or *October*. Though there is not so great a Variety of these as of the bulbous ones, yet they afford many curious Flowers; the best of which is the *Calcedonian Iris*, and a more lovely beautiful Flower the Sun cannot shine upon: It is of a darkish Colour, but prettily marbled. Like other Beauties, 'tis something tenderer than the rest, and may well expect an agreeable Care and Management, *viz.* to be planted in a warm and rich Soil, and to be defended from cold. There is a lesser sort of this not much different, only the Flower darker, and not so well marbled. They flower in *May*, sooner or later, as the Spring is backward or forward. Some think it best to take up the Roots at *Midsummer*, and keep them dry till *October*, which makes them the apter to bear Flowers.

As to the bulbous Kinds, (of which the *Persian Iris* is the chief, whose Flowers are of a pale Sky colour) they require a light Soil, and to be set in the Shade, otherwise their Flowers wither away presently: In replanting these bulbous rooted *Iresses*, care must be taken not to break the Roots.

Corn-flag.]



*Corn-flag.*] The *Corn-flag* or *Gladiolus*; and the Varieties thereof, are of no great esteem; yet because they come in a Season when there are not many other Flowers, some of them should be admitted into the Garden. These three are the chief, the *Constantinopolitan*, having Flowers of a deep red with two white Spots within the Mouth of every Flower; the *Corn-flag*, with a bright red or Carnation-coloured Flower; and the *Corn-flag* with the *white* or rather Ash-coloured Flowers. They flower in *June* and *July*, and will grow and encrease almost any where.

*Orchis.*] The *Orchis* or *Bee-flower*, though it grows wild in many Places, yet for Variety's sake is received into Gardens for the Beauty of the Flowers; especially the *Bee-Flower*, properly so called, forasmuch as one of the Leaves of the Flower is in form and colour so like to a *Bee*, that any one unacquainted therewith, may easily mistake it for a living *Bee* sucking a Flower. The *Fly-Orchis* is like the other, only the lower Leaf is like a Fly with Legs, and hath a List of Ash-colour and black. There are many other Varieties of *Orchis* and *Satyrions* distinguished by *Male* and *Female*, as the one resembles the Face of a *Man*, and the other of a *Woman*. There is also the *Grat* and *Butterfly* Kinds; the *white*, the *all red*, the *yellow*, and divers that are *spotted*; all which are found wild in several Places, in the *South* and *West* Parts of *England*.

They flower about the middle of *May*, if they be but set in a barren Soil; for the Sun and a rich Earth destroy them. They should indeed be dug up where they are found with a Turf about them, and so planted altogether after they have done blowing.

*Fritillary.*] The *Fritillary* bears a Flower in *April*, checquered with two or three Colours, sometimes *white* and *red*, sometimes *green* and *brown*, and sometimes *yellow* and *black*. The *Hollanders* have raised great Varieties from the Seed, and their Way of doing it is something singular. They take away the Earth where they intend to sow them four Inches deep, then lay flat Stones or Tiles at the bottom; upon which they sift a *Stratum* of fine Mould of four Inches, whereon the Seed is sown very thin, which is to be covered about half an Inch with the same sifted Mould. By this means the Bulbs are hindered from striking downwards, and thereby grow much bigger.

But the most common Way is to multiply them by their *Roots*, which are small and round, of two Pieces, as if joined together. The best Time of removing is in *Autumn*, before the Colds come on. The several Kinds have their several Times of blowing, from *March* to the end of *May*. *N. B.* The smell of some of the *Fritillaries* is very offensive, and none of them sweet.

*Globe-Flower.*] The *Globe-Flower* is introduced into Gardens out of the Meadows; only when it is found *double*, it is much admired for its beautiful pale *French* yellow: It will grow almost any where, and may be parted at the Roots in *March*.

*Star-Flower.*] The *Ornithogalon* or *Star-Flower*, is called by most of late, the *Star of Bethlehem*, of which there are great Varieties; some of them very pretty Flowers, and others not worth the naming. The great *white Star*, and *yellow Star of Bethlehem*, the *Ethiopian*, *Neapolitan* and *Arabian* Star-Flowers are the chief that are valuable. The first consisting of six white Leaves, which spread open like a Star, flowers in *June*. That of *Naples* and the *yellow* in *April*. The *Arabian* flowers in *May*; but the *Ethiopian* not till *August*. But there is still the *Indian Star-Flower* much esteemed for a fine Plant, having at the Extremity of its Stem a pointed Ear, which discovers several *white* Flowers with a *green* Button in the middle. This Plant coming out of a hot Country should be used tenderly, and in a Pot with fine untried Earth, that it may be removed from the extreme Frosts; which is a Compliment both the *Arabian* and *Ethiopian* expect, for they are also tender. The Roots lose their Fibres like Tulips, and may be taken up as soon as the Stalks are dry, and kept out of the Ground till the beginning of *October*: But the late Blowers, only for the sake of propagating them, must be removed only for a small Time.

*Geranium.*] The *Geranium* or *Crane's Bill*, so called for that the Seeds somewhat resemble the Bill of a *Crane*, is of several Kinds; some of them brought from *Africa*. Of which the largest sort, called *Arborescens Geranium*, is most remarkable, rising near three Foot high, and smelling like *Rhubarb*, and bearing large Bunches of purple Flowers variegated with darker Colours, and blossoms from *July* to *September*. There are many sorts of this Flower, most of them of little Notice, except it be the *African* sort, answering its Name, *Noble olens*, remarkable for its perfumed Smell in the Night, or after Sun-set. It has a great Root like a *Piony*, with large jagged Leaves, and flowers in *July*. The Leaves are small, of a purple Colour list about with yellow. It is a tender Plant, and for that reason should be set in a Pot. And forasmuch as too much Moisture is apt to rot the Roots, it must be kept dry and housed in the Winter. It may be raised either from the Seed or Slips.



*Anemomy.*] The *Anemomy* is one of the favourite Flowers of the curious Lovers of the Flower-Garden, for the great Variety of Beauties which it exhibits. They are both single and double. The *former* is little valued; only for the sake of the Seed which it produces (few of the double ones bearing any) *some* are preserved, whereby new sorts are attained. The Colours of this pretty Flower are various, *viz.* red, purple, scarlet, Pink, Peach, white, Ash-coloured, and some *strip'd*. The best and most perfect *Anemonies*, are such as have Stalks that will support the Flower without much *bending*, that have bushy Tufts and curled Leaves of two Colours. The chief Time of their blowing is in *March* and *April*; and if they are set in Beds by themselves (free from cold Winds, their mortal Enemy) they discover a great deal of Glory.

This Flower is propagated both from the *Seed* and the *Roots* or *Phangs*, which are flat, and of odd Figures. The *Roots* are to be taken out of the Ground in *June*, and laid by on dry Boards till *October*; when they are to be replanted as *Ranunculus's* and *Tulips*, and indeed require much the same Management and Culture. For a late blowing, their re-planting may be deferred till *Candlemas*; but these must not be expected to be so strong and bold. They love a rich dry Soil; and no artificial Composition can be better than *Untried Earth* of that Quality: But always remember that too much Wet is very prejudicial to the *Phangs* or *Flaps* of the new planted *Anemomy*.

As to its Propagation from Seed in the Nursery, some Diligence and Curiosity is required. Boxes filled with fine rich sifted Mould are best for these small tender Seeds, which are to be carefully minded, and gathered the latter end of *May*, for the Wind is apt to carry them off. The Seed may be sown in *February* or *March*, and they will ordinarily bear the second Year, and produce vast Varieties. If the Leaves of these Flowers prove few, and their Stalks short, you may be assured they dislike the Soil, and then they should be removed to richer and lighter, which may be done as soon as the Leaves turn yellow, and before they are quite dry.

*Tulip.*] The *Tulip* is another Flower of great Glory, and of high Esteem amongst the Curious. Than whose Culture nothing hath been more studied of late Years, and nothing at present seems better understood. The *Dutch* Merchants have made themselves famous for their *Breeders* of Self-Colours, from which have been produced the most glorious and elegant Beauties of several Colours, dazlingly fine, and agreeably mixt. Their Extravagance in purchasing these Curiosities is very extraordinary, though perhaps not so great at present as it has been, when it is said 100 *l.* hath been given for a single Root, and a Lady's Fortune of a 1000 *l.* has been paid in ten of these Roots.

Mr. *Bradley* has made the most accurate and ingenious Remarks on the Nature of *Tulips* of any other who has wrote on that Subject. His Observation of the annual dying of every old Root, and the Resurrection of two or three others in its stead, seems to be wholly new. We may doubtless depend upon his Relation of the Fact, and then his Observations and Inferences are right. (1.) That the *Flower-Stem*, the *Leaves*, the *Flower* and the *Seed* are all perfected from that very Root which is put into the Ground. (2.) That the Sap circulates through the whole; by the wasting of the old Root, and the growth of the new one, both of them corresponding immediately with the *Flower-Stem*. For the new Root has no Fibres to take in Nourishment from the Earth, and so to make it grow; and therefore it cannot be nourished any other Way than from some Vessels in the Stem by the returning of the Sap. (3.) That the Change in the Stripes of the Flower are to be expected from the new Root, after they are separated from the old ones, and have received their Virtue of being tinged from the Soil they were planted in; (such as *old Lime* and *Stone-Rubbish*) so that the alteration is not to be expected the first Year.

The Time of the flowering of *Tulips* is *March*, *April* and *May*, according to their several Kinds. But a Lover of Order and Oeconomy will always take Care to set the several Kinds in Beds by themselves, whereby he may expect a Succession of Beauties. The usual Classes into which these beautiful Flowers are commonly ranged, are, (1.) The *Agates*, which grow upon short Stems, and are veined only with two Colours. (2.) The *Bagates*, which rise the tallest, and are commonly marbled with *purple* and *white*. And (3.) The *Beazarts*, which have four Colours tending to *yellow* and *red* of several sorts. The Names given to every one of these several sorts are perfectly Arbitrary, taken either from Persons or Cities, &c. So that it would be to no purpose, as well as endless, to recite them.

Every one knows that they are propagated and increased both by the *Roots* and by the *Seed*. The first Way they are multiplied exceedingly, if (as is usual) they are removed every Year. But those who have made curious Observations, think it better to let them continue two Years before they make a Remove, finding such a Practice to make them



blow much the fairer. The Time of removing is as soon as the Flower is quite fallen: For to let the Seed-Head swell is thought to weaken the Root. After they are out of the Ground they should be rubb'd clean with a dry Cloth, and then laid upon dry Shelves (where yet the Sun should not reach them) till the Time of planting, which is in *October*.

The raising them from Seed is tedious; but yet many have thought themselves well rewarded for their Pains and Patience that Way. The Seed of the best and most perfectly ripe Tulips is to be chosen, and then sown in a Bed of fine untried Earth of a mixt sort: *September* and *October* are the Times of sowing, and they will begin to peep in *March* following. In the Seed-Bed they should remain two or three Years, and then ought to be removed into fresh Ground, and set at proper Distances, waiting for their blowing about the fifth Year.

Cold Winds and strong Clays are great Enemies to the well blowing of Tulips. The *Portuguese* and *Flemings* are said to be the first that brought the finer sorts into *Europe* from *Turkey* and the *East Indies*; but at present the best are to be found in *Holland*. The best Way to prevent their degenerating, as well as to obtain the end of Variety of Colours, is to diversify the Soils in which they are planted and transplanted. And some say steeping the Seeds in such Water-Colours, as you have a mind should prevail, will facilitate this Work; but of this some much doubt.

*Ranunculus.*] The *Ranunculus* is another curious and beautiful Flower, which requires much the same Care and Culture with the two former; only being something tenderer requires a warmer Situation, and a richer Soil. The Beauty of this Flower, and its strong Colours, are surpassingly fine, even above all others that adorn the Flower-Garden; and if it were odoriferous as the *Carnation*, it would be deemed a Master-Piece in Nature. There are great Varieties of them brought every Year from *Turkey*: But there are also every Year raised from the Seed amongst us as good, if not better. For Mr. *Bradley's* Extasy was very great, when he beheld the surprizing Productions of Nature in the several sorts of these Flowers in Mr. *Potter's* Garden at *Mitcham*, where he had observed, that from the clearest *White* to the darkest *Purple*, (excepting only the azure *Blue*) there wanted none to carry them through all the Colours to the deepest *black*, all raised from Seed. The self-coloured *Scarlet* (though the old sort and now common) when set in Numbers or Rows, do wonderfully strike the Eye, and dazzle it with their Lustre, especially at a Distance; whilst most of the other sorts expect and well enough bear a nearer View.

This Flower is of a very unsociable Nature, and will not thrive mixt with or standing near any other sort. Its *Phangs*, something imitating Claws, has occasioned it to be called a *Crow's Foot*. The Time of planting them is from the beginning to the end of *October*, in a shelter'd Place, exposed to the hottest Sun, and in as fat and rich a Soil as possible; skreened untried Earth, and well rotted Dung, equal Quantities I have found to be very agreeable to them, especially if on the top be strewed some fine Pidgeon-Dung; which not only enriches the Soil, but keeps them warm, and thereby preserves them from the extreme Colds in the Winter, which sometimes destroys them.

The *Phangs* must be set with the Claw downward, two Inches deep and four Inches asunder, in exact Rows. Those which are planted in Autumn will flower in *April* and *May*: But the great Admirers of this Flower reserve some Roots to be planted in *March*, and these will discover a new Glory about *Midsummer*; which yet will not last so long, by reason of the Heats, nor appear so large. If the Season is dry when they dispose themselves for flowering, they should be frequently water'd, and kept free from Weeds, which are great Enemies to them.

Besides their encrease at the *Roots* (which must every Year be taken up as soon as the Stalks turn yellow, and housed like Tulips) they may likewise be raised from the Seed, which should be sown in the Spring, in fine Mould, and under a hot Exposition. The double white sort should not be taken up till *September*, when its *Phangs* are to be removed and replanted immediately. Both the Flower and Stalk are found injurious, if not mortal to all sorts of Cattle: And this Caution may be a sufficient Warning where to bestow them when taken up.

*Cyclamen.*] The *Cyclamen*, called also in *English*, *Sow-Bread*, because Swine feed upon it, is a large bulbous-rooted Plant, bearing small Flowers, some flesh Colour, some purple, and some yellow, rising not above four Inches from the Ground with large mottled Leaves. Some of them flower in the Spring, and others in Autumn: And according to the Times of their flowering, so should their Seed be sown, which is the best Method of encreasing them. The Singularity of this Plant is that it first forms its *Bulbs*, and afterwards its *Flowers*, before the *Leaves* appear. Although they are commonly raised from Seed, yet they may be also propagated from the *Bulbs* or *Roots* cut in Pieces either in *April* or *July*.  
That



That with the *purple* Flower is sometimes found double; and the *white* Kind (which is sweet scented) is something tenderer than the rest. But indeed all of them are sometimes affected with a hard Winter.

*Hellebore.*] There are several sorts of *Hellebores*, all of them hardy Plants, and some of them growing wild in the Fields and Woods. The *black* sort is called the *Christmas-Flower*, because it is wont to blow about that Time, and continues blowing till *February*, having a *white* Flower. There is another with a *greenish* Flower, and a third with a *yellow* one, not ordinarily to be met with. They may be encreased from Off-sets and parting their Roots, either in *September* or *March*. The Leaves themselves are a pretty Ornament, and the large Spikes of their Flowers beautiful for their old Colours; but they die to the Root in Winter.

*Ladies Slipper.*] But there is a Species of this Plant called the *Helleborine*, or *Ladies Slipper*, which bears two or three Flowers one above another, in an oval form, with the upper part hollow, thereby something resembling a *Slipper*. The Flowers are sometimes of a *pale yellow*, and sometimes *brown* tending to *purple*. There is also a smaller sort with a *white* Flower, and another with *purple*. Pretty as they are, many of these are found in divers Places of *Yorkshire* and *Lancashire* growing wild. They blossom in *May* and *June*, and thrive best in a Soil not over fat, nor too much exposed to the Sun.

*Bacchus-Bole.*] The *Bacchus-Bole* is not much regarded, but for Variety's sake is sometimes admitted among the rest. It has broad Leaves, and Flowers *purple* colour'd and *white*.

*Jonquil.*] The *Jonquil* is of the *Narcissus* or *Daffodil* Kind, and are of several sorts, having bulbous Roots like Tulips, but should not be removed but for the sake of multiplying. The *small Jonquil* with a *yellow* and *double* Flower, blossoming in *April*, is most esteemed and admired for its beautiful Scent. The *great Jonquil* hath also sweet *yellow* Flowers growing one above another like a *Tuberose*. There is also a sort which blows in Autumn with *white* Flowers a little scented. But all the sorts which blow in the Spring have *yellow* Flowers, or inclined to *yellow*. These Flowers are something tender, and apt to be hurt as much by the scorching Heat of the Sun as by the Winter-Colds. They may be encreased by the Seed sown in the Spring, but the best and most expeditious Way is by the Bulbs, either in Spring or Autumn.

*Bassinet.*] The *Bassinet* is a sort of *Ranunculus*, but more hardy and needs less Care. The single and the double *yellow* flower in *April*. These are called *Butter-flowers*, or *Gold Knobs*, from their beautiful yellow Colour. But there is a scarlet one, whose Leaves are a little indented. They will thrive in ordinary Garden-Mould, and make a pretty shew among the Flowers of the middle Size, and may be encreased by parting the Roots.

*Lilly of the Valley.*] The *Convall-Lilly*, or *Lilly of the Valley*, is esteemed to have, of all others, the sweetest and most agreeable Perfume; not offensive or over-bearing, even to those who are made uneasy with the Perfumes of other sweet scented Flowers. Many wonder how it comes to be called a *Lilly*, having no Kind of Resemblance to any of the sorts of that Flower. This should have been more properly placed amongst the *Reptiles*, it seldom rising above four or five Inches from the Ground with its Stem, whereon are placed several small *white* Flowers one above another. There is a sort of them bearing Flowers of a pink Colour and larger Leaves, but less perfumed, which makes them less valuable; because the only Beauty of this Flower is in its Perfume. They bear best in a shady Place, are easily propagated by parting the Roots, and they commonly flower in *May*. It loves not to be often removed, and should be kept in Beds by themselves: But when the Roots come to be too much matted, it is good to *thin* them, and to refresh them with *untried* Earth.

*Dog's Tooth.*] The *Dog's Tooth* is of the *Satyrion* Kind, as the spotted Leaves and Roots manifest, but of greater Beauty and Rarity than any of the *Orchis* which grow with us, and therefore deserve a Place in the best Garden. There are known with us four sorts of the *Dens Caninus*, distinguished by the Colours of the Flowers which they bear, *viz.* the *white*, the *purple*, the *red*, and the *yellow*. It takes its Name from the Form of the Root, which is long and white like a Dog's Tooth. It explains its pretty Flowers about the Beginning of *April*; are propagated from the Roots in *August*, which yet should not remain long out of the Ground, nor at first planting be subject to too much Wet, which rots them. The best Roots are brought to us from *France* and *Flanders*; for it is very seldom that we can bring them to encrease well with us in *England*.

*Spiderwort.*] The *Spiderwort* is call'd by some *Bruno's Lilly*, because it bears Flowers on a Stem about a Foot high, like *Lillies* in the form of a Bell, and its Root is like that of a *Turnip*. There are two or three sorts of this Flower, *viz.* the *Savoy*, the great *Italian*,



lian, and the *Virginian Spiderwort*. The two first bear *white* Flowers, and the last of a *blue* Colour with red Threads in the middle. It is multiplied by the Root, and flowers in *June*.

After these might follow the Descriptions of some other Flowers of the perannual Kind under this Class; such as *Batchelor's Button*, *Dittany*, *Pasque-Flower*, *Colchicum*, *Mandrake* or *Golden Mouse-Ear*, *Satin-Flower*, *Golden-Rod*, *Double Pellitory*, *Double Featherfew*, *Double Camomile*, *Double Dog's Fennel*, *Double Ladysmocks*, *Scarlet Crofs*, *Gentian*, *Dames Violet*; with many others every Day introduced into Gardens from the Fields or Woods; which some late Authors have taken a great deal of Pains to describe, and have laboured the Methods of propagating them, whilst the Culture and Removal is easy, natural, and no ways difficult: I shall therefore content my self with having only just mentioned some of them.



## CHAP. V.

### *Reptiles, or the lowest vivacious Flowers.*

*Auricula.*] **T**HE *Auricula* or *Bear's-Ear* is justly valued and esteemed by all Florists. For Nature no where discovers her Variety of Colours, her Shades and pretty Mixtures more than in this little Flower, which is raised both from the *Seed*, and from *Slips*. In the *former* Way have been raised of late Years a surprizing Variety of sorts, which the Editor by Way of boasting and triumph Names after some great Family or conspicuous Person. In the latter Way you are sure to preserve and propagate the sort, with a little Care in removing and parting the Roots whilst they are in Flower, (which I take to be much the best Season) and then watering and shading them, if the Weather be dry, for three or four Days.

Those who are curious in preserving and boldly explaining the best sorts put them in *Pots*, the better to preserve them both in Winter and Summer. For the *Auricula* is a Plant that delights in the Shade; and too much Wet is apt to rot it in the Winter, and in the Summer to take off that beautiful *Powder* which so much adorns the Flower, and graces the *Eye* of it, which is esteemed the Center of its Beauty, and therefore is much regarded. Those therefore who take Pleasure to defend Beauties from outward Injuries of Sun and Weather compliment them with Sheds and Shelves of Boards one above another, facing only the *Eastern* Sun.

All the several sorts of *Auricula's* flower from the middle of *March* to the End of *April*; and if the Weather be not very dry, most of them will blow again the Beginning of *September*; tho' their Flowers in Autumn are seldom so fair and large as those in the Spring.

The Rules and Prescriptions laid down for Soils, wherein both to plant and sow this curious Flower have been various, according to Peoples different Fancies: But as it is a Plant that loves *Coolness*, well rotted Cow-Dung with an equal Quantity of *Untried Earth* well sifted, without any more ado, is an experienced good Composition both for the Flower and the *Seed*.

Great care should be taken to preserve the Seed from some of the best Flowers; for when the Stalks begin to grow yellow in *June*, and you discern in the top of the Seed-Vessel a little *hole*, you may then be assured the Seed is ripe, and the Stalks fit to be cut; which yet you must be sure to keep upright, lest the best of the Seed scatter. Let them then lye in a Chamber exposed to the Sun till the Beginning of *September*; and then sow the Seed in the aforesaid Composition put into flat square Boxes with holes at the Bottom to let out the Water. After the Seed is sowed pretty thick, sift more of the fine Mould over it about the thickness of a Crown Piece, and there let it remain all the Winter in the Sun and Air till they begin to come up, which will be about *April*; and then the Box must be removed into the Shade and often gently watered. As soon as they are grown to any considerable Bigness, they should be removed at proper Distances into Beds prepared for that Purpose, where they are to remain till they bear Flowers. Some of them will bear the Spring following, others in Autumn. The *double* and *strip'd* sorts must be often shifted else they will be apt to degenerate.

*Polianthus.*]



*Polianthus.*] There are divers sorts of this Flower, which appears early in the Spring, and some of them very pretty. There are of them both of the *Cowslip* and the *Primrose* Kind; of both which there are great Varieties. Some are *single* some *double* flowering; some *Hose in Hose*; some *Pentaloons*; and some Feathers. The Way of encreasing, variegating, and diversifying these is much the same as in the Article above; for they require the same Soil and Culture as the *Auricula*, and they should, like that, be frequently removed to fresh Places, if you would preserve their Beauty and Colours.

*Daisy.*] Altho' this be in all Places and Countries the most common plain Flower or rather Weed; yet even *these* when they are found double and variegated, they find a Place in the best Gardens, and make very beautiful and agreeable *Edgings*. There are thirty or forty sorts of them; but the most remarkable are the *double white*; the *double red*; the *double red and white*; the *Coxcomb*; the *Rain-bow*, and the *Hen and Chickens*. They are as easily raised from the Seed as parted from the Roots, and that either in *Spring* or *Autumn*. To preserve their Colours and Beauty, they should be taken up once in three or four Years. Too much Sun and Drought are Enemies to them; so that except they be set in the Shade, they expect the Refreshment of Water in a dry Time.

*Gentionella.*] This is another very pretty *Reptile*, and is indeed one of the most agreeable *bordering* Flowers. There are some Varieties of it in foreign Parts, but I have not yet met with more than one sort in *England*, viz. that with *dark blue* Flowers in the form of a *Bell*. And the *blue* is indeed of that dazzling Lustre that none of the Painter's Colours not even the *Ultra marine* can vie with it. If it likes the Soil (which should be light) it is apt enough to put forth Off-sets, which may be parted from the Root either in *Spring* or *Autumn*.

*Hepatica.*] The *Hepatica*, otherwise called *Liverwort*, from its supposed sovereign Virtues in Diseases of the Liver, is a very pretty Flower, and the more so, because it appears very early in the Spring, sometimes the latter End of *January*, and it is remarkable that the Flower oftener appears on its naked Stalk before the Leaves. The *three* most remarkable Kinds of them, are the *single and double crimson*, the *single and double blue or purple*, and the *single and double white* Flowers. The last of which is the more rare and tenderest sort. They are seldom raised from Seed, but may be easily propagated in a light sandy Soil by parting the Roots in *Spring* and *Autumn*.

*Violet.*] The *Violet*, tho' it grows wild under Hedges, is yet admitted into the Garden for its Fragrancy, and hereby it is something improved; for there are besides the single blue and white Kinds, the *double white* and the *double blue*, and the common sort with Leaves variegated with green and white. This Flower blows in *February* and *March*, and is best and most easily propagated by Slips and Runners from the Mother-Plant.

*Crocus.*] Of the *Crocus* or *Saffron-Flower* there are several sorts, besides those which blossom in the Spring; of which we have the common yellow and black strip'd; the plain Lemon coloured; the Orange coloured, the plain Purple, the motled Purple, and the white; which if they are planted in Beds by themselves and discreetly mixt, make a most agreeable Shew in *February* and *March*. They prosper almost in any Soil, and encrease wonderfully at the Root. The *Saffrons* and *Colchicums* are all of the *Crocus* Kind, tho' they blossom not till Autumn. Of the first I shall say nothing here, having treated of it as a Field-Plant, and cannot but wonder it is not made more so, considering the Profit it brings. But the *Colchicums* are pretty Flowers in Autumn, and appear not till after its large and flourishing Leaves die into the Ground. Some call it the *Resurrection-Flower*, as being a lively Image thereof. It makes an empty flourish all the Summer with Leaves only, which after sometime die and rot in the Earth; but at a certain Season, rises again with a more beautiful and glorified Body without Leaves. There are some different sorts of them; some *single pink*; some *double pink*; coloured Blossoms; and others chequered with *pink Colour* and *white*. They have large Roots like *Tulips*, and by them they are propagated.

*Snowdrop.*] This Flower obtains its Name, from its early appearance, even sometimes in *December* and *January* before the Snows are quite dissolved; and from its beautiful *white*. There are of them both *single* and *double*; and they make a very agreeable Appearance at the first of the Spring, being set in Rows on the Borders intermixt with the *Crocus's*: And like them they are multiplied by parting their Roots either in *Autumn* or *Spring*.

*Indian Pink.*] This Flower I ranged not with the other of its Name, because it is a *Reptile*, and because it is of a tender Constitution, requiring more and different Care. It was brought from *China*, and loves a warm Exposition: And therefore for the Sake of its pretty variegated Flowers it is usually set in Borders under a South Wall, where it will display its Beauty for several Years. Tho' it is good every Year to sow new ones

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from



from the Seed which it bears, lest a sharp Winter destroy the old Roots; as sometimes it will.


*Pansy.*] The *Pansy* is a Reptile of the *Violet* Kind; for its Stems are apt to creep on the Ground, and it bears Flowers not unlike the *Violet*, but they are commonly of three Colours, viz. *white*, a *yellow*, *purple* and *blue*. And when its Leaves are strip'd with *yellow* (as sometimes they are) it makes a very pretty Shew in Borders. It will out-live the Winter; but it should be sown a-new every Year.

*Aconite.*] The *Aconite*, to which the Epithet of *Winter* is usually put, because it displays its yellow Blossoms commonly the very Beginning of *January*. It is apt enough to over-run the Ground both by its Off-sets and by its Seed, and therefore there is little need to direct any Method of Cultivation.



## C H A P. VI.

### *Annual Flowers from the Seed.*

*Sun-Flower.*]  F all the Tribe of *Annuals* this is the largest and tallest. For it is even taller and larger than the *Perannual* one, which we have already described: If it be sown in *March* in a rich Soil and well watered, it will rise near eight Foot high on one single Stem bearing several large yellow Flowers, some of which will be near a Foot diameter. These are seldom admitted in small Gardens; but in large ones (when set in Rows and at proper Distances) they make a glorious Shew.

*Snapdragon.*] There are two or three Varieties of this Flower viz. the common *white*, the *variegated white*, the *yellow* and the *red*. They are raised from Seed; and altho' they have no great Beauty or Smell, they serve to adorn Chimnies and Flower-Pots, and will grow almost any where, even on Walls. It is called *Calves-snout* or *Lyon's Heart* from the form of its Flower; which appears from *May* to *July*. The Seed which is ripe in *August*, may be sown in the following Month or in *March*. It is a hardy Plant; but dies as soon as it hath produceth its Seed.

*Lark-Heel.*] The *Lark-Heel* or *Lark-Spur*, so called from the Resemblance its Flower hath to the Heel of the Lark, is a pretty Ornament in a Flower-Garden, where there is room for it to extend its Branches. Otherwise they should be sown in Quarters by themselves. Some of them are very double and prettily variegated, some blue, some purple, some white, and some Peach coloured. And when all the Colours are well mixt, and the Flowers double and strip'd with white, nothing can make a gayer Shew at a Distance. And it is multiplied by Seed sown either in Autumn or Spring. But indeed it is apt enough to sow itself in Autumn, and if the Winter prove mild, *such* will flower in *May* or *June*, and then the Spring-sowing will come a Month after. The Seed should sometimes be changed and fetch'd from a different Soil, otherwise they will degenerate, and become self-coloured and single.

*Poppy*] The *Poppy* is one of the Wonders of Nature, that so tall and large a Flower should arise from one of the smallest of Seeds in one Year; tho' it may be here observed that *Tobacco*, which hath still a smaller Seed, doth yet produce a much stronger Plant. Were the *Poppy* as good as it is great, as sweet as it is beautiful, and as lasting as it is hasty in Growth, nothing could be more glorious. But its ill Smell, and hasty withering makes it much less regarded. It may be sown either in Autumn or Spring; but indeed this like the former sows itself fast enough and displays its Flowers in *May* and *June*, some red, some purple, some white, some strip'd, and some very double. There is a *Dutch* wild *Poppy* that blows not so high as this, whose Flowers are *red* and *white* strip'd, and blossom from *June* till *August*. The *Argemone* being a sort of *Poppy*, by Mr. *Tournefort* called the *prickly Poppy*, I mention under this Head; it comes up with a Stalk about a Foot high, with long narrow notch'd Leaves: On the Extremities of the Stalk appear Flowers in the form of a *Rose*. The Seed is to be sowed in Autumn, and transplanted in *April* into Borders, where they may attain their perfect Growth.



*Candia Tuft*] There are two sorts of the *Candia Tuft*, differing only in the Colour of their Flower, the one *white* the other *red*. It brings its Flowers in Tufts in *June* and *July*, on a Stalk about a Foot high. It is raised from Seed, and may be sown either in Autumn or Spring: But it is good to sow at both Seasons; that there may be a better Succession of their Flowers. Some Authors affect to make a Bustle about the Methods of cultivating them, as if they were difficult and tender, and wanted Coverings, Hot-Beds, and a more than ordinary Care, and better Soil; whereas it is an hardy Flower, and will grow almost in any Soil.

*Double Marigold*.] The *single Marigold* is hardly worth mentioning as a Flower, but the *double one* is large and beautiful enough, making a goodly Shew with its deep *yellow* for several Months in the Year, and in the Winter too, if it be mild and open. It serves for all the same Uses of the Kitchen and Dairy as the *single one*, and may be raised from its own Seeds; but like most other beautiful *double* Flowers it degenerates, being constantly sowed in the same Place and Soil.

*Venus Looking-glass and Venus Navel-wort*.] This is a very pretty *Annual*, when sown either on *Edgings* or *Spots*; for it strikes the Eye agreeably enough with its *pale blue*, blooming about Midsummer, and rising not above five or six Inches: As doth also *Venus Navel-wort*, which hath *white* Flowers.

*Parnassus*.] The Flower of *Parnassus* has Leaves like a Violet, and a Flower on the top of the Stalk in the Shape of a *Rose*, composed of several unequal Leaves all of them fringed, and placed in the Shape of a Round. It loves Moisture and a holding Soil, but is sometimes apt to be injured with Cold, especially if sown before *March*.

*Muscipula*.] The *Catch-Fly*, or *Muscipula*, is a Flower very apt to spread itself without any Care, and indeed will soon over-run the Flower-Garden, if not kept within Bounds. It is however a pretty Flower, of a red or crimson Colour, which appears in *June*, and continues blowing five or six Weeks, especially if they out-live the Winter, as they commonly do. There is a glutinous Matter always sticking upon its Stalks, which proves a Trap for little Flies, and hence it derives its Name. The Flower is sweet, and looks well in Patches.

*Flos Adonis*.] This Flower seldom rises above a Foot high, and appears with its crimson Flowers about Midsummer; it is hardy, and easily raised from Seed in Spring.

*Nigella*.] There are several sorts of the *Nigella*, otherwise called *Fennel-Flower*. The *single* sort has large Leaves and *blue* Flowers; the *small leaved* with *white* Flowers, and another from *Candia*. It is propagated from Seed commonly sown in Autumn, that the Plants may be fit to be removed from the Seed-Bed into their proper Places in the Spring.

*Lupine*.] The *Lupine*, because it has some pretty Varieties, (as the great and small blue, the white and the yellow) is usually sown with us as a Flower; but it is indeed nothing but a *Vetch*, and in the Southern Parts is sown in the Fields as such, and as Pulse for their Cattle. *Pliny* in his mentioning this, affords us one (amongst a great many other) Instance of his Readiness to give into Superstition and Fable, viz. that their Flowers keep their Course with the Sun; and that whether the Air be cloudy or clear, they serve instead of Dials for the Time of the Day: And likewise that they have some other Motions, by which, as Prognosticks, the Husbandmen judge of the Weather.

*Scarlet-Bean*.] The *Scarlet Bean* is another Kind of Pulse introduced out of the Kitchen into the Flower-Garden. It is indeed one of the Kinds of Kidney-Beans, whose Pods (though some think them a little ranker than the white, yet) are singularly good used in Pickles. However, it is now adopted for a Flower, because of its beautiful *scarlet* Colour; and it is accordingly encouraged as such to twine about Sticks set in Borders. Its Excellence is, that it will continue blowing from *May* till the Frosts come on. They are usually employed to adorn Walls and Arbours.

*Annual Stock*.] The *Annual Stock* is another pretty Flower for *Edgings*, or to be sown in *Spots*: It bears Flowers of a *Pink Colour*, sometimes strip'd with *white*, about Midsummer.

*Viola tricolor*.] This is likewise called *Hearts Ease*; is a Dwarf, and makes a pretty Edging; having Flowers variegated with purple, yellow and red, about *June*.

*Scabius*.] I am afraid the Derivation of the *Scabius*, from the Latin word, *Scabies*, as if it was an infallible Cure for the *Itch*, is not much to be depended upon; though the Botanists ascribe a great many Virtues to this Plant, and fancy it will cure almost any sorts of Sores. However that be, it is a very pretty Flower in *August* and *September*. It makes no great Shew at a Distance, though it rises on small Stalks near three Foot high; but if it be viewed near at Hand, the little *white* Specks mixt with the *purple* have an uncommon Beauty. There are chiefly two sorts of this Flower cultivated amongst us, viz. the *Spanish Scabius*, and the *Indian Scabius*,



*Scabius*, which last is much preferred for its sweet Scent, called therefore *Musk Scabius*. The Seed may be sown either in Spring or Autumn; but the best Season for sowing is in *September*, and then they will be ready to transplant out of the Seed-Bed in *March*, to be set in their proper Places and Distances. There is a sort called *Mountain Scabius*, with much larger Leaves, bearing Seed which should be sown in *March*.

There are several other Flowers raised from Seed of less Note; such as the *Pheasant's Eye*, *Royal Comfrey*, *Mallows*, *Barba Jovis*, &c.

But I have no Inclination to weary the Reader about Trifles, and the Cultivation of Plants wherein there is no Difficulty, as some late Dictionary-Writers have done; making the Press groan, and the Patience of the Inquisitive tired with tedious Repetitions, and long Directions how to cultivate a *Daisy*, and when to sow a *Cowslip*.



## C H A P. VII.

### *Of Annuals to be sown in Hot-Beds.*

**O**F this Race of Flowers we have introduced amongst us from foreign Parts, several pretty valuable sorts, which I should think deserve a Place in the Hot-Bed altogether as well as a *Cucumber*.

*French and African Marigold.*] Amongst these are the *French and African Marigolds*, which though they may be raised in the natural Earth, yet by reason in that Way they will come late, and consequently continue but a little while before the Frosts overtake them, it will be worth while to set them forward in an Hot-Bed.

The *French* sort, called also the *Indian Rose*, makes a very agreeable Mixture with other Flowers in Borders, with its variegated Velvet Flowers intermixt with *yellow* and *red* Colours. For its *Duration* and *Beauty* no Flower exceeds it; but its very disagreeable, not to say *stinking* Smell, makes it so offensive to many, that they quite banish it from the Flower-Garden. Several Attempts have been made, first to remove its Smell, and then to give it an agreeable Odour; but hitherto they have not (as I can hear) proved successful, though the Seeds have been steep'd in all imaginable Perfumes; so hard is it quite to mend or alter corrupt Nature, according to the old Aphorism,

*Quo semel est imbuta recens servabit Odorem  
Testa diu.* —————

However, I should not give this over as wholly desperate, seeing it is certain we can heighten the Flavour of Melons, both by steeping the Seeds in rich Wines, and by artificial Preparations of Earth.

The *African* sort is also a most beautiful Flower, if it proves double; and to make it so, the Seeds should always be gathered from the *double* sort.

This indeed hath but one Colour, but it is a most beautiful *yellow*, and the Flowers are much larger than those of the *French* sort. And although it has no good Smell, yet neither has it such an one as to be offensive, as the other is. It bears its long black Seeds in full Pods plentifully, which should be gathered at the Approach of Winter, when the Flower dieth.

Both sorts may be removed out of the Hot-Bed into their proper Places, the latter End of *April* or the Beginning of *May*, for they are not very tender.

*Amaranthus.*] The *Amaranthus*, otherwise called the *Flower gentle*, is chiefly of two sorts, the *greater* and the *lesser*. The best of the *greater* sort, is the *large purple*, that bears long Spikes of round hairy Tufts of a reddish purple Colour, and from its bending its Head toward the Ground, is called by the common People, *Love lies a bleeding*.

Of the *lesser* sort, (much the tenderest and most beautiful) there are great Varieties: The *Amaranthus Cocks-comb* of all the several Colours, viz. *red*, *scarlet*, *yellow*, if they have Justice done them by Removes from one Hot-Bed to another, are most esteemed for their beautiful dazzling Colours, for forming their Heads into the Shape of a Cock's Comb, and for



for their Duration, continuing in their Beauty from the Beginning of *June* till the first Frosts come on; before which their Seed should be carefully gathered from those that explain themselves best. This sort, tho' not near so large as the other, will sometimes rise near two Foot high; and when it is set in the richest Earth, in a good Exposition to the Sun, and sheltered from Winds, will make a most beautiful Shew, especially if their Colours are sorted with Art, and placed in Rows at equal Distances.

The *Amaranthus Tricolor* differs little from the former, save that its Beauty is chiefly in the Leaves, variegated with *green*, *red*, and *yellow*; which Mixture of Colours every one knows is beautiful enough. There is also another sort of *Tricolor*, whose Leaves are *buff*, *red*, and *green*, but not so agreeable as the other. These are something tenderer than the *Cock's-combs*, and therefore should remain longer in the Hot-Bed before they are removed, and then treated with Care and Caution; for the least Cold kills them. But yet they all abundantly merit the Esteem, and diligent Nurture of the curious Florist; for indeed no good Garden should be unfurnished with these beautiful Flowers, the chief and most deserving of all the *Annuals*.

The Seed of these Flowers is of a bright shining black and small, but of long Duration, continuing good seven or eight Years; which the curious Florist should observe with Pleasure; because some Years will not bring their Seed to perfect Maturity, and then an old Stock is valuable. The Seed being small, should be sown near the Surface in the Hot-Bed, in very rich Mould, in *February*; and about the middle of *March*, when the Plants have four Leaves, should be removed into a new one after the great Heat is over; where they are to be nursed with Care, letting them have as much Air and Sun as is consistent with their tender Constitution. The *Cock's-combs* may be trusted abroad under a warm Wall and in rich Earth at the latter End of *May*, but it is best to keep the *Tricolors* under Glasses till the middle of *June*; and even then, if they are removed into Pots, to let the Pots stand under Glasses for four or five Days.

*Convolvulus.*] The *Bind-weed*, or *Convolvulus* is of two sorts, *viz.* the *greater* and the *less*. The *greater* rises up with many long winding Branches above six Foot high, having at the Joints Flowers like Bells of a deep blue; which never open but in the Night, and close again at Sun-rise: As doth

The *Convolvulus Minor*, which hath smaller Leaves and a weaker Stalk, rising (if supported) two Foot high. The Flowers are less than the other, but far more beautiful, being of a fair *Azure blue*, with a *white* Star in the Bottom shaded a little with *yellow*. The *Indian Chinces*, known so well to the Ladies, excellently represent the Colours of this pretty Flower. The *first* is hardy, and may be raised in the natural Soil, tho' it flowers not till Autumn: But the *last* expects the Assistance of a Hot-Bed, and then it will continue a Succession of its pretty Flowers from *June* to *September*, when the little black Seeds contained in the Husks should be carefully gather'd and preserv'd for future Use and Beauty; the whole Plant dying in the Ground at the approach of the first Frost. There is a *red-flowering Convolvulus* brought from the *West-Indies*: But this is a greater Stranger amongst us, and not so beautiful as the other.

*Marvel of Peru.*] This is called by some the *Wonder of the World*, because of the great Variety of its Flowers, even from the same Root; and because, like the *Convolvulus*, it explains not its Flowers till near Sun-set, and shuts them up again in the Morning. This Flower dies for the most Part every Winter, and therefore must be raised from the Seed in a Hot-Bed the beginning of *April*: By which means it comes to Maturity, and flowers all *August* and *September*. There are two sorts of them, the one bearing *red* and *yellow* Flowers, and the other *purple* and *white*, the Colours intermixt with great Variety. The *plain* sorts are of no Value; and therefore great Care should be taken to gather the Seeds from those only which are variegated. All our late Authors (who follow one another in a Track) say, that laying Horse-Dung over the *young* Roots will preserve them alive till Spring; and that if the *old* Roots be well dry'd, wrapt up in Woollen Rags, and so kept from Moisture all the Winter, within Doors, they will sprout again in the Spring. But I venture to say there is no trusting to this Method. If such a Thing has been; yet it is not *ordinarily* to be expected. Upon the Remove from the Hot-Bed in *May*, give this Flower a rich Earth, a good Exposure to the Sun, and free from Wind.

*Female Balsom.*] This is another tender Plant, that wants the Assistance of the Hot-Bed to bring it forward, that it may explain its Flowers before the Winter overtake it: It hath Leaves like those of the Peach, and its Flowers are only of Self-colours, sometimes *crimson*, sometimes *purple*, and sometimes *white*, upon Stems arising about a Foot and a half high. The first Frost at the beginning of Winter is its sure Destruction; and so it must be raised every Year from the Seeds, which resemble *Lentils*.



*Sweet-Sultan.*] The *Sweet-Sultan*, so called, because it is said the *Grand Seignior* affected to wear it in his Turbant, is one of the Species of *Blue-Bottles*, not much unlike the former, bearing Flowers in Autumn on Stems two Foot high; some *white*, some *yellow*, and some *purple*. They are sweet-scented according to the Name, and will not come to any great Perfection without the Assistance of an Hot-Bed in *April*.

*Capficum Indicum.*] The *Guinea Pepper* is chiefly admired for its long and round *Scarlet Fruit*, which it discovers from *August* till the beginning of *October*, if it be assisted in the Spring by an Hot-Bed, otherwise the Summer will not ripen its Fruit. In hot Countries they pulverize the yellow Seeds of this Plant, and use it as Pepper; but it is *Scelerata Sinapis*. The Acerbity which the Pods give to the Tongue is very pungent; and yet some pickle them and use them in Sauce. They are impatient of the first and least Frost, and therefore die in the Winter, but may easily be raised from its Seed in the Spring.

*Indian-Cress.*] The *Indian-Cress*, by some called the *yellow Larkspur*, is not only a pretty Flower, but acceptable in the *Sallet Furniture*. Its Flower is a beautiful *yellow* strip'd with *black*, and appears earlier or later, as it is sown or not sown in an Hot-Bed: For altho' it will come up in the naked Ground, nay the Seeds will lye two or three Years in the Earth and grow at last; yet for the Sake both of its Use and Beauty it is wont to be accelerated in the Hot-Bed, that the Flowers may be obtained in *May*, and a Succession of them continued till the Frosts come on.

*Sensitive Plant.*] I mention this here not as a Flower, but as an *Annual* of Curiosity to be raised and nourished with Care in a Hot-Bed; and the more it is assisted that Way, the higher and bolder it will rise, sometimes to two or three Foot high. It is called the *sensible* or *sensitive* Plant; because as soon as you touch it, the Leaf shrinks up together; but in a small time after the Hand is removed, it recovers its Life and Vigour. Many Conjectures have been made concerning the Philosophy of it. The plainest Reason of its sudden Contraction is from the *Heat* of the Hand. It being a Plant whose Membranes and parenchymous Parts are very tender, by any sudden Heat, it becomes much affected, and the Circulation of its Juices are stopt, just as admitting, of a sudden, the direct Rays of the Sun upon a tender *Melon* or *Cucumber* Plant in *March* by opening the Glasses. This indeed is not so sudden a Withering and Contraction of the Leaves, because the Plants are not so tender; but in an Hour or two's Time we see the same Decay and Dislike, sometimes to their entire Loss of Life. The merry Conceit of making this *Contraction* a Test of Virginity, is often a Banter upon the fair Sex.

I am sensible this chaste Plant discovers its Aversion to outward Injury and Rudeness from the Admission of sudden *Cold* as well as *Heat*: Both Heat and Cold producing the same Effect from the same Cause, *viz.* Forasmuch as *both* contract its Pores and Fibres: These make the vaporous Juice, that maintains and preserves the beautiful Verdure of its Leaves, retire, and so drives it down toward the Root. This Juice, which filled and swelled the circulatory Vessels, being dissipated, the Plant itself must undergo the same Fate; which, toward the End of Summer, for want of proper Juices for its Nourishment, never fails to overtake it; its Leaves must wither, contract and close themselves up. With Respect to sudden Heat, we see the same thing, when we read before a Fire; the Cover of the Book is drawn back, for want of that Moisture, which the Fire has dissipated.

But that there may be nothing wanting, both for the Instruction and Entertainment of all curious Inquirers into Vegetable Nature, I shall add and conclude with one Chapter more, *viz.*



## C H A P. VIII.

*Of the several Hindrances and Obstructions to Improvement, and the general Annoyances to Vegetables, whether in the Field, the Forest, the Fruit-Garden, or the Flower-Garden, with their probable Remedies.*

**W**ITHOUT a prudent Care and Foresight, much both of the Pleasure and Profit of the Gardener and Husbandman, will be lost by accidental Annoyances and Injuries and external Accidents. And that *these* may be the better guarded against, and their probable Remedies rightly understood and timely apply'd, I shall distinctly consider them, as they may be supposed to affect, either the *Field*, the *Forest*, the *Fruit* or the *Flower-Garden*, taken either singly or conjointly.

1. With Respect to the *Field*. The Impediments that generally hinder the Husbandmen from making the greatest Advantage of their Ground, are either the Distempers of the Ground itself, or some evil Accidents that occasionally happen thereto, or to the Vegetables growing thereon.

The Distempers are generally caused, either by the abounding of Water, which causes Coldness and a dropical Disposition; or by the abounding of a dry barren Earth or Mineral, which being destitute of Moisture, and those nitrous Particles, which should cause a Separation of the Parts, will not afford terrestrial Matter fit to enter the Bodies of Vegetables for their Nourishment and Increase; or else the Accidents come by blasting Winds, rapacious Fowl, Vermin, Weeds, Fearn, Heath, Broom, and other unprofitable Vegetables, which impoverish and eat out the Heart of the Soil.

To prevent the Distempers occasioned by the abounding of Water in rushy and boggy Land, I have already prescribed the Remedy of deep Trenching, even a Foot or two below the Spring when it is discovered. And if these Trenches be made deep enough and frequent enough, there will be a singular Advantage gained by having the Matter taken out of the Trenches thrown upon the Soil, whereby the rest will be considerably raised, and the Distemper often cured, tho' it should so happen that no Drain can be obtained to carry off the Water.

After the Land is once laid dry, to cure its Coldness and untractable Nature, all such Dungs and Composts are to be applied as are most fit by their Heat and Nitre to make a Separation of the Parts, as Lime, Rags, Soot, Pidgeon and Poultry Dung, &c. laid on discreetly, and not in too great Quantities, that they may not scorch or burn up the Grass or Grain, instead of improving it. Sheep's Dung, Hog's Dung likewise, and all Soil and Litter of Cattel, by Reason of their Dung, Urine, and Heat of their Bodies lying thereon, have a *Warmth* in them, and are fit for cold Lands on that Account; and indeed by Reason of their Moisture for dry Lands also. For it is sometimes found that Land may be dry and cold too, as many of our *Wood Lands* especially are, where Lime and the Ashes of Vegetables are found to be so singularly beneficial.

But as there is nothing in Animal Bodies but what affords excellent Manure, so in these Cases, *Horns, Bones, Hair, Flesh*, both of Beasts, Fish and Fowl, are good and very rich: And those that know the Virtue of them buy at Cities and Sea-Port Towns, Woollen Rags, Sheep Trotters, stinking Fish, and other Offal of Animals to be mixed with other Soils.

But then again, where *Moisture* is rather required than *Heat*, there floating (as I have before observed) by Land-Floods, if practicable, and the Dirt and Mud of Ponds and Highways is most proper. For indeed Dryness is one of the greatest Causes of Barrenness, and sandy and gravelly Soils do most of all suffer this Way; and therefore wheresoever *Floating* can be practised, the Advantage to such Soils and low Lands is incredible, provided the Damage from natural Floods and Inundations at unseasonable Times do not spoil all; or that the Water artificially superinduced do not remain too long, so as to *make Bogs* and *breed Rushes*.

Another Remedy for light barren Land, and what I have mentioned under that Head, is *Marle*, the more greasy and friable it is, the better, without Regard to the Colour, (for



(for there is good of all sorts) for it gives that Tenacity which light Soils want, and hinders the Rains from sinking away too soon, or being too soon exhaled by the Sun. *Chalk* also hath much of the Nature of *Marle*, but not so strong nor durable.

Mr. *Higgins* is lately come into my Parish, having obtained a Patent for curing Sterility, for he hath invented a Preparation for manuring barren Lands, which is by *Lime* burnt three or four times over, and calcined into a Powder; a Bushel of which he sells for a Shilling, and saith it will go as far as ten or twelve in the ordinary Way. It seems possible enough to draw the Salts of *Lime* into a much less Compass, and to exclude all useless mineral Matter: But then the probable Effect of such Calcination will be this, That it will have only the Nature and Property of Pidgeon Dung to exert itself for one Year, and leave no abiding Virtue behind. And that truly seems to be the Case (by what I can hitherto judge) of all the Chymical *Quackery* in Husbandry; and I doubt the new invented Liquor for infusing Grain will not do so much.

*Ant-Hills.*] *Ant-Hills* are great Annoyances to the Husbandman; for even in wet Years the Grass they bear, is worth little, and in dry ones they bear hardly any at all; therefore a good Husband in three Winter Months takes out the Core or inward Parts and lays their Surface, *even not lower* than the other Level, that it may not hold Water.

*Moles.*] *Moles* are also Enemies where they come, whatever the common People may fancy; for by much burrowing of the Ground, the Summer Droughts more sensibly affect it than otherwise. There are many certain and expeditious Ways of destroying them by Traps well known and by a dexterous Management of a small Spade; but the surest Way of destroying the Breed is to find out their Nests in *March* and *April*, which may be discovered by the largeness of the Heaps. Mr. *Speed* prescribes red Herrings burnt on the Mole-Hills, or Garlick put in their Furrows to fright them away; which yet are but imperfect Cures.

The destruction of *Foxes*, *Badgers*, *Otters*, *Polecats*, *Hares* and *Rabbits* those Enemies to the Husbandman must in the general be left to the Sportsmen; who yet for the most Part do more harm than good, and have not that regard to the Industry and Labour of the Husbandman as they should, when they trample Corn and break Hedges.

The Mischief and Injury that is done among Grain, whether in Stacks or in the Barn, by *Mice*, and *Rats* where they abound, is vastly great: And many Contrivances there are to *deceive* as well as to *kill* them. For the *first* Purpose, the making of Stavels with Stone Caps, and Granaries described already under that Head, is most effectual and secure; and all the Contrivances of Traps do little for the *latter* in Comparison of a good Cat, if she can but have access to the Places where they harbour most. But surely the Method of Poison should be refused, as not answering the End best, and yet the most dangerous.

*Crows*, *Ravens*, *Rooks* and *Jack-daws*, do incredible Mischief to the Husbandman, both in Seed-time and in Harvest, and yet if their Nests and Young ones were watched and destroy'd, their Multitudes might soon be lessened. However, Mr. *Blith's* Invention of a Scare-Crow hath been experimentally found to be of singular Use. Kill (saith he) a Crow or two in the Place where they most haunt, and before the Corn is cut; there make an Hole, about a Foot deep, and two Foot over. Stick the long black Feathers of a Crow round the Edges thereof, and some at the Bottom. Several of these Holes may be made if the Ground be large, and the Carcasses tyed upon an upright Stick; for the Holes thus dressed, especially if the Feathers are greased so as to make Gunpowder flick on them, (which is a further Improvement) will for some Weeks affright all the Crows away.

*Sparrows* also are a devouring Bird, great Breeders, and come in great Multitudes. Some say it is to little purpose to destroy their *young ones*, especially the first Brood, for that they presently betake themselves to their Mate, lay and breed afresh; whereas if the Young ones be suffered to fly, the old ones wait upon *them* and breed no more. So that the best Way is to take the Season in *March* or *April* (or indeed any time in Winter) to destroy the *old ones*, which is most effectually done by the large folding Sparrow-Net, which will take many dozens at one fold; if the Place be discreetly baited with Chaff and the Net covered therewith from sight, at a Time especially when Food is scarce.

I have already directed the Remedy to prevent Smuttiness in *Wheat* under that Head; which, tho' it is a great Evil and Damage to the Husbandman is yet most effectually cured by *Soaking*, not *Sprinkling* the Seed in Brine twelve Hours, and just before sowing, dry it with *Lime*.

But there are still some other Annoyances to the Husbandman's Farm proceeding from the *Vegetables* growing thereon; as for Instance, *Furze*, *Broom*, *Fern*, *Heath*, *Rushes*, *Thistles*, *Couch-Grass*, *Carlock*, and *Wild Oats*, &c.



*Furze.*] I cannot find but Land of every Nature and Kind is subject to bear *Furze*, and sometimes it will bear them so long that it will bear almost nothing else, at least without great Charge and Pains. But it is certainly the Disgrace of every Farmer to see them in any Plenty about him; and therefore he should set himself in earnest to destroy them Root and Branch as an unprofitable Vegetable, except in such Places where Fuel is extremely dear and scarce. Experience shews that *Tillage* alone and plowing up the Roots will not do; for when the Land is laid down again, they presently spring from the Roots and Fibres remaining in the Ground, and without further Care will but more and more over-run the Ground. Their springing again therefore must be watched, and their Destruction repeated by a sharp Pick-Ax in hot Weather, and after this if you lay a sufficient Quantity of Dung, Lime or Marle, they will then be effectually destroyed and you'll see no more of them.

*Broom.*] The most pernicious Plant or weedy Shrub that annoys the Farmer is *Broom*, which as it sheds but few Leaves, so it continually sucks out the Heart of the Land it grows upon. The Ways commonly recommended to kill it, such as plowing, burn-bating, manuring with Dung, &c. prove all ineffectual: But forasmuch as I have received something worth communicating to the Publick on this Head from my worthy Friend and Neighbour, Sir *William Hustler* in *Yorkshire*, I shall here set down what hath been the result of his long Experience in this Matter.

"My Situation (saith he) being upon a Sandy Land, productive enough of Grass, but apt to put up *Broom* and *Fern* so as to cumber the Ground; the *Former* of these I think I can destroy, and have done so, by cutting with a Knife, Hook, or any such fitting Instrument, the Stalk of such *Broom* near a Handful above the Ground about *Midsummer*, which never shall produce any more till that Ground be opened again by plowing or digging; which Land so addicted (tho' having been freed from *Broom* for twenty Years) will be as full as ever: And no Remedy could I ever find but the above Method. I have been told that the same would have the like effect upon *Brackens* or *Fern*; but I have experienced the contrary; and should be glad to be rid of this Grievance." And this Difficulty comes next in our Way;

*Fern.*] For *Fern* is undoubtedly one of the worst of Weeds, and hard to be destroyed, where it hath any thing of a deep Soil to root in, its Roots extending sometimes eight foot deep. The best Remedy is often mowing whilst in Grass, *i. e.* for several Years twice a Year in *May* and in *August*. And when the Land is plowed up, *Lime*, *Marle*, *Sticks* or *Rags* strewed well over it will perfect the Cure. This Evil hath one good Quality attending it, that if cut when the Sap is in it and left to rot upon the Ground, is a very great Improver, and will mellow the Land so as to prevent its binding. And its ashes after burning are supposed to yield double the Quantity of Salt that any other Vegetable will do, insomuch that in some Places they use them instead of Soap to wash their Linen with. Some have said that much treading the Ground with a double Quantity of Cattle is an infallible Way to kill them: But this I dare not answer for.

*Heath, Rushes.*] *Heath* and *Rushes* are killed more easily by the Plough, and the latter without it, if the Ground where they grow be well drained and kept free from standing Waters in the Winter, and be well covered with Horse-dung.

*Thistles.*] *Thistles*, tho' they are a certain Indication of Strength and Richness of Soil, & they over-shadow and hurt both Grass and Corn. The best Way and Time to destroy them is to mow them down just before they come to Seed, and it is very rare to find after that, that they will out-live the Winter at the Root. But from amongst the Corn they must be cut down with a small Hook the latter End of *May* or Beginning of *June*.

*Couch-Grass.*] *Couch-Grass* is a pernicious Weed, keeping the Land hollow and loose and much draining away its Riches. It is soon killed by laying it down to grass; but whilst the Land is in *Tillage* it should be frequently fallowed in dry Weather, and well mowed, cleaning the Teeth of the Harrow at every turning. Such Land is not fit for Winter Corn; but white Oats that are sown late will over-top and help to kill it.

*Carlock.*] *Carlock*, which is supposed to be bred chiefly from Cow-dung, is a most spreading Weed from the Seed, and will soon over-top a Land of Barley with its yellow Flowers. It is the most harmful Weed both in its Roots and Branches which are few, and away before the Corn flourishes in the Ear. Some have ventured to mow off its Tops in *May*, and thereby killed the greatest Part: But where the Land is subject to Weeds that are encreased by Seed, the best Way is to lay it down some time with Grass-seed, and feed it.



*Wild Oats.*] *Wild Oats* encrease much in open Winters, and are very hard to be destroyed. Some recommend the sowing *Beans*, where they are apt to grow, taking it for granted, that Sheep turned amongst them, will eat only the *Wild Oats* and let the *Beans* alone: But that is not always to be depended on; for tho' the Tops of *Beans* are bitter; yet Sheep are tempted and known to eat them while they are green and tender. A dry Summer Fallow or two is the best Cure.

*Moss.*] 2. I come now to say something of such Annoyances and Injuries as affect the *Forest* and Field-Plantations. When the Bodies or Stems of Trees are much infested with *Moss*, it is a certain Indication that the Roots reach a cold Gravel or Clay, or some spewy Soil full of Wet, or Springs that causes *Moss* and hinders their flourishing. To rub off the *Moss* with a Hair-Cloth in wet Weather is good; but the best preventing Remedy is to plant high on the Sides of deep Drains.

*Rubbing.*] The Rubbing of Cattle is another great Injury to new Plantations; and their venomous gnawing off the young Shoots is a worse. It is therefore better never to plant at all, than not sufficiently to guard the Trees from such external Violences. Where the whole Plantation is a *Grove*, or *Wood*, or *Forest*, the whole may be easily enclosed at once, and made to forbid the Entrance of such Cattle at least as hurt or wound the new set Trees; or if the Trees are planted in Hedge-Rows, a Ditch on one Side, and a dead Hedge on the other, will effectually secure them; but where Forest-Trees are planted in Rows for Avenues, there must be an effectual Defence made for every single Tree, which is best done either of these two Ways: First, by three upright sturdy Posts set in a Triangle about the Tree, and held together by two cross Rows of strong Laths; or, Secondly, (which is much the cheapest Way) by *tumping*; i. e. by raising a Circle of good Earth two or three Foot high, and six Foot diameter round the Tree, leaving the Ditch, from which the Earth is taken round about, as deep as possible: This effectually secures each Tree from being gnaw'd or rubb'd by Cattle; and in spewy boggy Grounds is an excellent Remedy to prevent the Roots being drowned with too much Wet. But in this Method must be remembered, that the Trees must be planted on the Surface, and not put into a Hole before the Earth is raised about them.

*Rooks.*] Those who love the Noise of *Rooks* will not perhaps think them Annoyances; but it is plain to a Demonstration their nestling in such Flocks amongst Timber and Forest-Trees, is a mighty Hindrance to their Growth and Thriving. Their Dung is Poison wherever it falls; and their Nests, which are composed of the tender Branches of Trees are constant Annoyances to the Tops, and much check and retard their Growth.

As to what particularly respects the *Fruit* and *Flower-Garden*, and their Enemies, there needs not much be said here, having in great Measure already spoken thereof under the Chapter of *Blights*. But I must first lay in this Caution, that there is no greater Hindrance to the Growth and Thriving of all Vegetables, than to be so crowded together that their Roots, Branches and Leaves interfere one with another. Therefore in all Orchard and Garden Plants, whose Fruit and Flowers you would have fair and beautiful and whose Growth you would expect considerable, take Care that they keep their Distances. *Apples*, *Pears*, *Plumbs*, *Cherries*, and other Fruit-Trees are of divers Statures, both in Regard of one another, and of their own Kind; some of greater Extent than others. *Pears* especially larger than *Apples*: So that it is hard to appoint one certain Distance to Trees in an Orchard. *Eight Yards* I always think little enough in the general Standard for *Apples* and *Pears*: But after all, the most certain Rule is, to take Care that one Tree do not shade another; and therefore to let the lowest Trees) if you intend to make the most of your Ground) be set on the *South* Side, and the highest Pear-Trees on the *North* Side; for should the higher Trees stand *South*, they would cast their Shade over the rest of the Orchard.

It must be either Ignorance or Covetousness that shall prompt any one to crowd his Trees into a little Room: But it is easily demonstrable that a proper Quantity of Trees will bear more Fruit, than double the Number in Excess.

The Fairness and Largeness of Flowers and Fruits are very much augmented, by preventing the running up of a Multitude of Stalks from the same Root. The curious Gardener observes this nicely in his *Carnations*, not suffering above one or two Spindles up such Roots or Stools where he intends a greater Fullness and Largeness in the Flower. *Shrubs* likewise that bear either Fruits or Flowers are to be governed in like Manner. Every one knows that *Gooseberries* and *Currants* degenerate to Smalness, or bear not at all without this Care and Provision, that the *Suckers* be taken away. And how to pick them I have shewn particularly under this Head.



Thus also the several *Roses*, when they grow up to thick Bushes, do not bear so well; but being kept to one single Stem, and discreetly pruned (not being deprived of the Sun) they bear abundantly, the *Damask* especially. Accordingly the weak Shoots of *Vines* are great Robbers, and should be carefully removed both in Winter and Summer, to give Strength to the larger Branches and the Fruit.

There are yet several other Annoyances to Vegetables in the Fruit and Flower-Garden, which I shall just mention before I conclude this Chapter. *Pismires* are exceeding troublesome in some Gardens, and the best Remedy I find, is what I have formerly prescribed, [*Gentleman's Recreation*] viz. to cut *Dew-Worms* in Pieces (upon which they will gather) and then kill them with scalding Water out of a wat'ring Pot. *Earwigs* are great Enemies and Destroyers of *Carnations*; but they may be caught in the hollow Hoofs of Beasts put upon the End of a Stick set in the Ground. *Caterpillars* are best destroyed in their Eggs. There is a very bad sort that usually lodges in the rough Stems of Gooseberry-Bushes all the Winter, and in the Spring fall out to destroy their Leaves, and the Blossoms of *Apricots* and *Peaches*: These, when discovered, should be shaken off upon Cloths laid under the Bushes, and pick'd off occasionally from the Fruit-Trees. The Decays and Rottenness that some bulbous Roots are subject to through too much Moisture, is best cured by opening the Root, and applying a dry sandy Earth to the Part; but it is best prevented by laying the Borders like a Carp's Back, gibbous, with such high Ridges as may throw off the Winter Wets. Most *Cherry-Trees* are apt to be Hide bound, the Muscles of their Bark covering the Wood horizontally; and this Disease often makes them dwarfish, but the Cure is easy and very effectual: viz. to slit down the Bark perpendicularly with a Knife.

## The C O N C L U S I O N.

**A**S this whole foregoing System has been in Effect no other than an Explanation and unfolding of Nature's Riches, it is very fit, and very decent, that the summing up and Recapitulation of the whole should be in a devout admiring and adoring the Wisdom, Contrivance, Curiosity and Skill of the Great Creator and Former of the vegetable Kingdom.

It was the great Sin and Blemish of the Heathen World, that in the Contemplation of the Beauty and Usefulness of the *Creature*, they did not raise their Minds to consider the Wisdom of the *Creator*. The Particulars that offer themselves to a thinking Mind to assert Providence, and to confute the Vanity of the old *Epicureans*, are infinite; and it would too much enlarge the Bounds of my present Purpose, to engage too far in shewing the great Variety here is both of Trees and Plants provided for all Ages, and for every Use and Occasion of Life: Some soft, some hard, some strong, some tough, some long and tall, others short and low, some thick and large, others slender and small; proper either for Building or Tools, or other necessary Utensils: Some for Food, and some for Pleasure, as hath been already described.

If one were to survey the curious Anatomy and Structure of the Bodies of Plants, and shew the admirable Provision made for the Conveyance of the animal Juice or Sap, the Variety and Texture of their Leaves, the Gaiety and Fragrancy of their Flowers, the wonderful Method of their Generation by Male and Female Parts\*, the great care Nature has taken of the Conservation and Safety of the Seed and Fruit, by seasonable and well fenced Coverings: If to these Considerations one were to add the various Ways of Nature in dissipating and sowing the Seed, and afterwards in the nice Provision that is made for their Support and Aid in standing and growing, so as to minister to the Ends and Uses of life: And for such Vegetables as are weak, and not able to support themselves, the wonderful Faculty they have so readily and naturally to make use of others stronger than themselves, thereby using them as *Crutches* to their feeble Bodies; some by their odd convolving Faculty, by twirling themselves like a Screw about others; some by catching at, and (as it were) grasping for Help by their *Clusters* and *Tendrils*†, equivalent to Hands: All which

\* See Bradley. Chap. Of the Generation of Plants.

† *Claspers* are of a compound Nature between that of a Root and of a Trunk. Their Use is sometimes for Support only, as in the Claspers of Vines, Briony, &c. whose Branches being long, slender and fragile, would fall by their own Weight and that of their Fruit. But these Claspers taking hold of any thing that is at hand; which they do by a natural Circumvolution which they have. Those of Briony have a retrograde Motion about every third Circle, in the Form



which various and surprizing Methods, being so nicely accommodated to the Indigencies of those helpless Vegetables, is a manifest Indication of their being the Contrivance of some great Artificer; and that the Author of Nature doth *γερμανίζει* in them, and characterize out such Variety of elegant Figures, that every Plant shall seem to have more of Mathematical Art than the most masterly Hand can shape or fashion.

Why, for Instance, have those Plants that bear little or no Seed with us (as the *Poplar* and *Sallow*, &c.) in every Bough a Propensity of sending forth Roots; by the Occasion whereof, each Branch is made an entire Tree or Plant? And why for Want of Off-sets hath Nature made the Mushroom propagable by the smallest of their Shreds and inconsiderable Parts? And why is the *Indian Fig*, that hath no Stalk, to be propagated only by its Leaves?

Again, why have Plants such an Eagerness to flower and seed, and such an Impatience of being disappointed? For if you pull off the Bud of the Rose, it will push for a Rose again? But indeed most other Flowers and Fruits have the same Desire to produce their Seeds, and therefore have given Occasion for Artists to make Rules of Retardation.

Again, Why do the Seeds stick close to the Pedal by which they are joined to the Stock until they are ripe and fit for Propagation, and then fall off in the most fit Season for future Growth?

Why do those Plants that usually die every Year, yet if they are disappointed of running to Seed, continue to survive many Years; even so long till they are permitted to run up to leave Seed behind them: But that they are appointed by the universal Law of Nature not to desert their Order, till they have settled a Succession, or produced others of their own Kind?

What should be the Meaning that Nature in Vegetables for the most Part observes the *Quincunx Order*, of one sort or other, in the Situation of the Buds and Leaves, from whence the Eruptions and future Shoots are made, but that an uniform Equilibration, and Uprightness of Trees may be preserved? For should all the Boughs break out in one Place, or on one Side; that Side would preponderate, would bend down the Body into an unseemly Crookedness, and deprive it of that Uniformity and Straitness, which is so necessary for its Health and Vigour. And it may be observed that those Plants which are without these Regulations, are generally such as are made to grow upon and twist about other Things, and not to bear up themselves; as the *Hop*, the *Bind-Weed* and the like.

What, I say, should be the Meaning of all this, and many more Instances that might be given of *Art* and *Contrivance* in the Formation of Vegetables; and *Wisdom*, in making them subservient to allay the Pains and Miseries\*, and to supply the † Wants and Necessities of Human Nature; but that there is one supreme, wise, intelligent Agent that doth preside over, and govern every the minutest Part of the Universe, disposing all Things in Number, Weight and Measure; and, to all the rational Part of the Creation, affording such plain Impresses of the divine Wisdom and Care, as manifest the Providence and Superintendence of GOD, the great, the adorable, the infinite Creator?

To whom be ascribed all Glory, Honour, Worship, and Praise, Thanksgiving, and Power, *eis τὰς αἰῶνας ᾧ ἀμήν*, for ever. Amen.

*Form of a double Clasp, so that if they miss one Way, they may catch the other. Sometimes the Use of Claspers is also for a Supply, as in the Trunk Roots of Ivy, which being a Plant that mounts very high, and being of a closer and more compact Substance than that of Vines, the Sap would not be sufficiently supplied to the upper Sprouts, unless these assisted the Mother Root; but these serve also for Support too. Sometimes also they serve for Stabiment, Propagation and Shade. For the first of these serve the Claspers of Cucumbers: For the second, those or rather the Trunk Roots of Gamomile; and for all three the Trunk Roots of Strawberries. Harris Lex. in Verb. Claspers.*

\* Tales Plantarum Species in quacunque regione à Deo creantur quales Hominibus & Animalibus ibidem natis maximè convenient: Immo ex Plantarum nascentium frequentia se ferè animadvertere posse, quibus morbis qualibet Regio subiecta sit, scribit Solenander. Sic apud Danos, Frisos, Hollandos, quibus scorbutus frequens, Cochlearia copiosè provenit. Ray Hist. Plant. l. 16. c. 3.

† 'Tis an admirable Provision made for some Countries subject to Drought, that when the Waters every where fail, there are Vegetables which contain not only Moisture enough to supply their own Vegetation and Wants, but afford Drink also both to Man and other Creatures in their great Extremities. Derham, Phys. Theol. pag. 438.

Dr. Sloane's Description of the Wild Pine is, that its Leaves are channelled fit to catch and convey Water down into their Reservoirs; that these Reservoirs are so made as to hold much Water, and close at Top, when full, to hinder its Evaporation: That these Plants grew on the Arms of the Trees in the Woods, as also on the Barks of their Trunks. See Phil. Transf. No. 251.

